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Thesis Title: *A Study of Peer Activity in the Early Years through a range of contextual frameworks.*

Abstract:

This report focuses on exploring peer activity in the early years through a range of contextual frameworks. The research is conducted within a children's centre that provides nursery education for children aged 3-4 years as defined by the Early Years Foundation Stage - EYFS (2007).

Research rationale focuses on the notion of *'reflexive co-construction'* through '*sustained shared thinking'* (Siraj-Blatchford, 2002, p10). In order to appreciate this concept more fully among peers, it is suggested that a robust pedagogy is required to enhance the practitioner's understanding of peer activity.

It is argued that context and peer activity are inextricably linked. If we are to consider peer activity, then its relationship with context must be more fully studied and articulated than in previous discussions. From a socio-constructivist standpoint, the study applies four different, but complementary theoretical perspectives to more fully describe and analyse the social realities children encounter on a daily basis. These perspectives are, *an ecological understanding of human development, distributed cognition, activity theory and situated action.*

Peer literature in the early years is both varied and confusing in terms of context and outcome. Because of this predicament, it is suggested that there is an opening for studying peer activity from a contextual viewpoint.

The research applies a qualitative ethnographic and observational approach. Data is generated from documentation, observations of, and discussions with, children and staff and is analysed within the four identified theoretical perspectives. The application of distributed cognition, activity theory and situated action further illuminates how children use a range of strategies to engage with one another. The research argues that such interactions within differing contexts create unique opportunities for reflexive co-construction amongst the children themselves. What emerges from this work is a pedagogical model, relating to peers and '*reflexive co-construction'*, which provides another dimension to current early years educational documentation.

Acknowledgements

I am grateful to all those who have participated in the development of this research project.

I thank my tutor for his never-ending patience and understanding.

Above all, I thank my family for their ongoing support, in particular my daughter Rose who has been my inspiration.

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CHAPTER 1: Background

1.1 Introduction

My fascination and interest in peer activity has evolved as I have taken on the dual role of teacher and consultant in a children's centre working with children aged 0-5 years. This has placed a greater emphasis upon the observation of both children and practitioners in order to advise and support. Previously my work as a teacher focused very much on the importance of the role of the adult, in particular the adult-child relationship and its significance in terms of providing an effective early years education. This position has not changed, but has broadened out to also explore the child's role in the area of peer activity.

I use the term 'peer activity' as a means to describe how children engage with one another in an activity in varying situations. I define the term 'activity' as a moment where children are engaged in a task. The activity itself has a clear beginning, where children may come together to agree on their aims, although these can at times be rather vague; a middle, where the activity intensifies as they attempt to achieve their goal and a clear ending. The latter may be identified when the children have successfully

reached their objectives. However, the activity may come to a close when they fail to achieve their aims and are thus required to re-evaluate the situation. This may result in the children abandoning their task or beginning again with some alteration in design. It is within peer activity that opportunities for peer interaction will emerge. I utilise the phrase 'peer interaction' to identify the ways in which children relate to one another. Some may take the lead and dominate, others may follow, or the children may interact with one another on an equal footing.

On many occasions I have observed the practitioner intervening in an activity only to disengage the children from their task. When discussing this issue with practitioners in terms of enabling peer interaction, their response is often one of uncertainty as to their role and in their understanding of the significance of peer activity. There is a sense of unease in terms of interpreting what they see on a daily basis. This, I believe, is a challenge for many practitioners including myself. Observation is a crucial part of the practitioner's role and yet if we do not appreciate the significance of peer activity within the context of a children's centre then this, in my view, creates a barrier. Our judgment is impaired and thus, our work with children is not as effective.

When attempting to understand the reason for this unease on the part of the practitioner, I initially explored current educational documentation namely 'The Early Years Foundation Stage'- *EYFS* (2007 *i) and was intrigued by its examination of peer activity. The EYFS (2007), which reflects a range of pedagogical theories, is a remarkable resource that has raised the profile of early years education. However, it does have, in my view, some 'gaps' or 'blind spots' in terms of understanding peer interaction. The guidance which explores peer activity in terms of what it means and how it presents itself is examined at a somewhat simplistic level. I wish to argue that there is another layer that has not yet been fully scrutinised.

1.2 Early Years Educational Pedagogy

In order to explore the possible reasons for the practitioner's lack of confidence in understanding peer activity, I have examined early years educational pedagogy in both its historical and current forms. Despite the publication of the Plowden Report (1967), which highlighted the importance of nursery education; and the significant pioneering work of such theorists as Kellmer Pringle (1986, 3rd edn), whose compelling work emphasised the requirement to recognise a child's '*psycho-social needs*' (1986, p15) to

*(i)The Early Years Foundation Stage (2007) will be revised March 2012

enable early years development, opportunities for high quality early years experiences within educational settings varied throughout the country. However, interest in the early years has gained momentum over the last 15-20 years since the emergence of significant research data concerning child development. Among the many influences at work is research into early brain development.

Shore's (1997) contrasting summary of both outdated and recent ideas regarding brain development denotes that previously it was considered *'learning experiences before the age of three do not influence later development very much.'* (1997, pp15-27) Conversely, current research proposes that *'early experiences affect on the design of the brain'*, (1997, pp15-27) and thereby impact upon future cognitive development.

Undoubtedly over the past 20 years there has been a greater interest in brain development and its impact upon education. Indeed '*interest in the early years has also been spurred by new research and scholarship in fields such as neuroscience, developmental psychology and economics*' (Waldfogel and Washbrook, 2011, p1). The practitioner's attention is not only drawn to consider child development issues in the early years, but also such factors

as gender differences (Gurian, 2001) and elements which promote school readiness. (Waldfogel and Washbrook, 2011). The growing awareness of such issues alongside such initiatives as '*The Ten Year Strategy for Childcare' (2004), 'Every Child Matters' (2004) and the 'Childcare Act' (2006)* has been a contributory factor leading to a more centralised and consistent approach to early years.

Early years education is now high on the government agenda, particularly as it supports parents returning to work. This has culminated in the implementation of the EYFS (2007), which consolidates previous projects, namely the *'Curriculum Guidance for the Foundation Stage' (2000) and 'Birth to Three Matters' (2002).* Supporting this work are many influential writers such as Lesley Abbott and Helen Moylett (2003, 3rd edn), Marion Dowling (2010, 3rd edn), Cathy Nutbrown (2006, 3rd edn) and Iram Siraj-Blatchford (1998, 2002), to name but a few, who have provided a definitive resource of current guidance for practitioners on early years educational and pedagogical issues. Such work has placed at the forefront of early years education, the need for practitioners to have a greater understanding of principled pedagogy, if their practice is to improve. Indeed Stephen (2010) who refers to pedagogy as *'the silent partner in*

early years' , argues that *'inhibitions to engaging in debates over pedagogy may hinder support for children's ;earning and may also limit professional growth'* (Stephen 2010, p 18).

The EYFS (2007) presents its early years principled pedagogy through four themes which recognise the importance of the interplay between the *Unique Child, Positive Relationships, Enabling Environments and Learning and Development* as a sound basis for developing effective practice in the early years. At the heart of its pedagogy is the role of play as the medium for early learning experiences and the acknowledgement of the importance of the adult's role in supporting child development. This has been moulded by the significant work from such theorists as John Bowlby (2005) and his notion of *'attachment'*, Vygotsky's (1978) socio constructivist view of learning, Bruner's (1983) concept of '*scaffolding*, Bandura's (1977) emphasis on the importance of adult modelling to support '*imitative learning*' and Pascal's et al (1997) exploration of the symbiotic adult/child relationship. Indeed, the EYFS (2007) states that *'children need sensitive, knowledgeable adults who know when and how to engage their interest and how to offer support at different times' (2007 *ii).*

*(ii) 'Enabling Environments Supporting Every Child' *Card 3.2 Early Years Foundation Stage (2007)*

Thus, the great emphasis which the EYFS places upon the role of the adult is very evident and this is totally appropriate when one considers the importance of the literature listed above. The document quite rightly draws upon an impressive array of knowledge, which provides it with a solid platform from which to engage with practitioners and underpin their daily practices. It gives it credibility. But I feel the EYFS (2007) is lacking in its understanding of peer dynamics, which I consider explores the varying patterns of peer interaction and examines how and when such interaction occurs as children engage with one another. Peer activity forms a fundamental part of a child's nursery experiences and thus requires attention.

1.3 Rationale

An initial justification for raising one's awareness of peer dynamics is located in Iram Siraj-Blatchford's et al (2002) report 'Researching Effective Pedagogy in the Early Years' - REPEY, which explores the relationship between pedagogy and children's learning. The detailed study aims to enhance our understanding of the impact of what it refers to as '*staff pedagogy*'(2002, p10) upon children's learning.

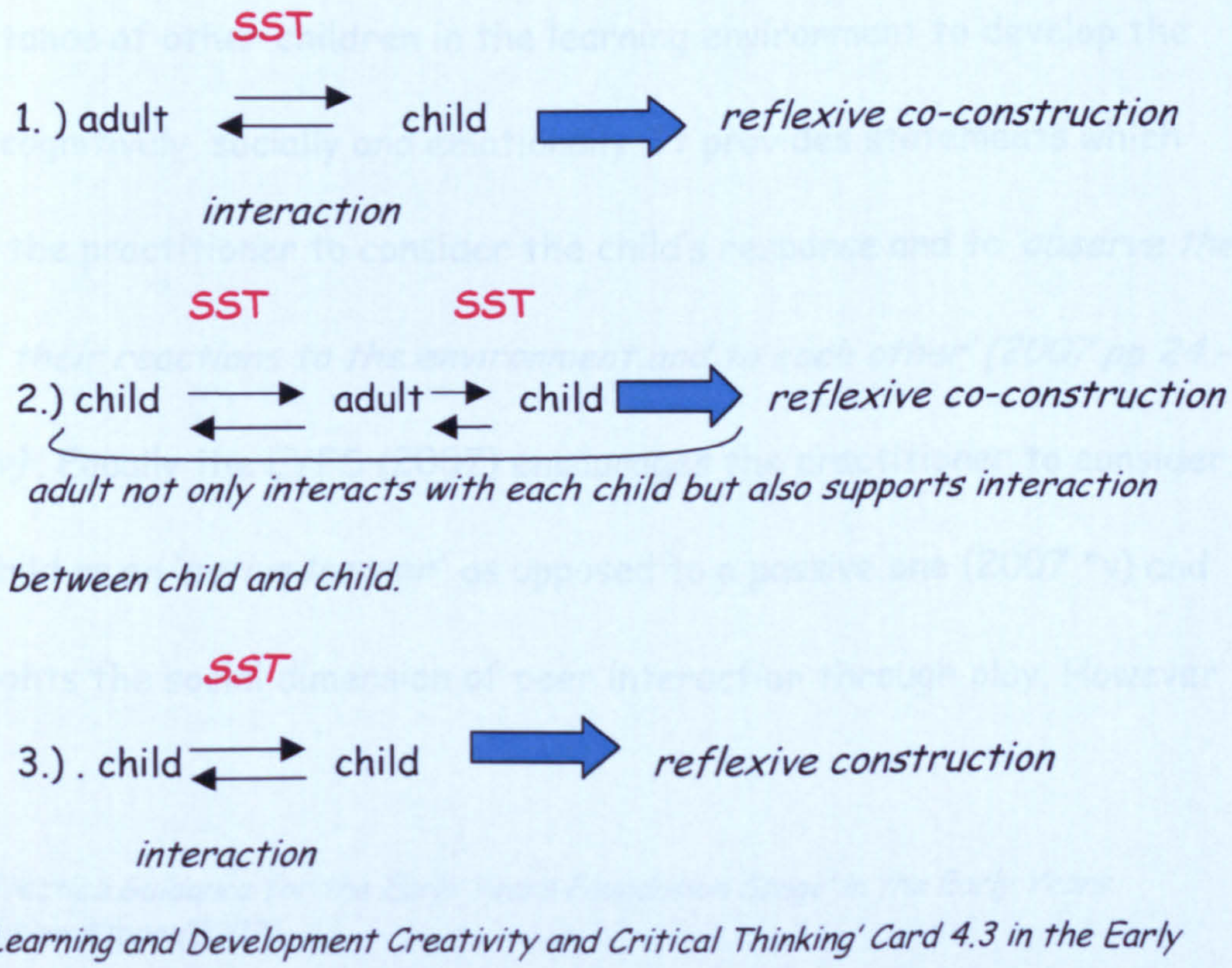
What particularly attracted my attention was the REPEY's focus on adult/child interactions. It emphasises the need for '*reflexive co-construction'* (2002, p10) where both parties are involved in '*sustained shared thinking'* as a means to attain higher levels of cognition. In order to provide for such effective interactions, the report states a need for an equal balance of child and adult led activities. My response to this extremely valuable research is that to be able to facilitate '*reflexive co-construction'* (2002, p10) through adult/child interactions we require a greater understanding of peer dynamics, so that practitioners can respond appropriately. How do children interact with one another in these situations and how should we, as practitioners, respond to such activity to extend *'reflexive co-construction'* amongst the children themselves?'

The EYFS (2007) builds upon the findings of this report and examines this notion of '*reflexive co-construction'* through its exploration of *'sustained shared thinking'*, (2002, p10), which discusses the importance of the adult/child relationship and how this can be instrumental in developing cognitive development. Such ideas originate from Vygotsky's socio-constructivist view of learning. The EYFS (2007) defines *'sustained shared thinking* as,

*'the adult being aware of the children's interests and understandings and the adult and child working together to develop an idea or skill' (2007 *iii).*

Although this is an extremely valuable point to make in terms of developing effective pedagogy, I feel once again it is also lacking in one key area – the recognition of the importance of peer activity in relation to '*sustained shared thinking*'. This is not only from the perspective of the child, but also from that of the adult. One can identify '*sustained shared thinking*' between firstly, the adult and child; secondly, adult and another child and thirdly, between child and another child as shown in Fig 1.

Fig 1: Interaction through *sustained shared thinking* (SST)



**(iii) 'Learning and Development Creativity and Critical Thinking' Card 4.3 in the Early Years Foundation Stage*

For the practitioner to become attuned to the young learner in order to develop *'sustained shared thinking'* they must also *empathise with the peer dynamics* which are a fundamental feature of the learning environment. The practitioner must appreciate and understand how children respond to one another as they interact in a range of activities. From this, the adult can then utilise and apply a range of strategies to support and sustain the children's shared thinking. A principled pedagogical framework is required if the practitioners are to engage effectively with peer activity as a source of *sustained shared thinking.*

In its defence, the EYFS (2007) does acknowledge peer activity and the importance of other children in the learning environment to develop the child cognitively, socially and emotionally. It provides statements which guide the practitioner to consider the child's response and to '*observe the child, their reactions to the environment and to each other' (2007 pp 24 - 116*iv)*. Equally the EYFS (2007) encourages the practitioner to consider the child as an '*active learner*' as opposed to a passive one (2007 *v) and highlights the social dimension of peer interaction through play. However

**(iv) 'Practice Guidance for the Early Years Foundation Stage' in the Early Years Foundation Stage (2007)*

**(v) 'Active Learning' Card 4.2 in Early Years Foundation Stage (2007)*

an examination of play, although important in its own right, is not enough to develop a study on peer dynamics. For the purposes of this research project it merely creates a distraction.

Therefore I feel there are some key questions we need to ask ourselves in order to be fully prepared and empowered to support peer activity in order to facilitate adult and child initiated activity. In simple terms, what is peer activity and what does it look like?

1.4 Patterns of Research on Peer Activity

On commencing this study I naturally became intrigued as to what research has already been conducted in this area. Although there is an overwhelming array of published research material on peer activity, I feel there is an opening for exploring peer dynamics in an early years educational setting. However there are several pieces of work which have attracted my attention in terms of methodology, age range and outcome.

One such example providing a Piagetian approach to examining peer activity is the Doise and Mugny's (1981) notion of '*Social Cognitive Conflict*' as cited in Light, Melly and Clermont, (1989, p139) and Light and Littleton (1994, p176) which considers the relevance of a symmetrical relationship amongst

peers when engaged in an activity. They conducted a series of experimental studies designed to address the notion of peer interaction. They observed one group of children aged 5-7 tackling a task individually before working with a partner and compared this with another group who worked on the same task entirely on their own. Data from both groups when compared suggested that those children working in a pair were able to solve the set problem more quickly than those working individually. They argued that the children working in a pair challenged each other's thinking. This, in Piagetian (2001) terminology set an imbalance or conflict, which needed to be challenged and questioned in order to achieve equilibrium, thereby extending and developing the children's cognitive skills. From this study, one can conclude that symmetrical relationships provide a framework for peer activity.

Light and Littleton (1994) also present a similar study in terms of exploring peer activity amongst children aged 7-8 years, but they describe a somewhat mixed view of peer interaction. Their work identifies that only some children benefit cognitively when working in a group. Using a quantitative experimental approach they observed children working in groups on a given task. Some children were able to solve the problem

successfully through collaborative work, whereas others were disinterested in group interaction and moved away to work in isolation. They concluded that peer activity does not benefit all children. Light and Littleton (1994), however, do not explore the reasons for this scenario, but simply raise the issue that one must consider the subtle social, motivational and emotional factors which impact upon the levels of interaction.

Both these studies explore how peer interaction can benefit or hinder cognitive development, as opposed to examining what it is that children do when engaged in peer activity in their natural educational setting. Equally they consider peer activity in an older age group, rather than 3-4 years.

Conversely, Damon and Phelps (1989) have analysed three ways in which one can examine peer activity namely '*peer tutoring, co-operative learning and peer collaboration*'. Each one examines peer activity from either an asymmetrical or symmetrical relationship. The first category focuses on the ideas that a more able child teaches or supports another less able child in an activity. Co-operative learning, however, considers the types of interactions which enable children to work together on a common goal. Finally, peer collaboration identifies learning where all participants are

equally new to the task and thus rely on each other to find the answer. Schaffer (1996) describes this learning process as a moment of *'joint discovery'* (1996, p329). What is interesting here is the categorisation of peer activity which provides a useful framework for observing and clarifying peer dynamics. However their work does not focus on the early years.

Brownell and Carriger (1991) have explored peer collaboration in toddlers using an experimental approach to data collection. They argue that some toddlers from 18 months can collaborate with their peers as they play together. This suggests that examining peer activity in the earlier years is possible and indeed valuable to extending and improving our understanding of peer activity. Unfortunately, this study does not consider whether the collaborative behaviour observed in a controlled environment is evident in the child's natural setting. As the research only focused on collaborative behaviour we do not have the opportunity to examine other types of peer activity such as co-operation, modelling and imitation; but it cannot be denied that this is an interesting piece of work, particularly as it is very revealing in terms of what young children are capable of. However, although centred in the early years, Brownell and Carriger (1991) do not explore the

interplay between peer activity and context. I do not believe that we can study children with regard to peer activity away from their natural everyday setting and this is a fundamental weakness of their work.

Azmitia (1997) also introduces us to the area of peer activity in the early years in her discussion on peer interaction from the age of 18 months to adolescence. Her research suggests that age is a key factor when examining peer interaction. She argues that before the age of 2, children can only interact with each other '*at a rudimentary level and even then they do so infrequently*' (1997, p211). Azmitia (1997) suggests that as children develop their cognitive, social and emotional skills their ability to interact and collaborate becomes more sophisticated. Children aged 3-4 can manage some joint activity, but find it difficult to collaborate as their problem solving skills are not applied appropriately. She suggests that rather than explore a problem to its conclusion they may simply change the game thus avoiding finding the solution. However, I feel in contrast to Brownell and Carriger's (1991) findings, this is rather dismissive of peer activity and I would argue that peer dynamics is far more engaging for both the child and the observer than she perhaps suggests. Indeed, I propose that the following research project will challenge this view, in that peer activity is

varied in terms of content, motivation and context. However, her work has identified that if children enjoy an activity, and are familiar with both the activity and one another, the peer interaction is more revealing in terms of what they can do. Thus we can argue that the relationships between the children are an important consideration in terms of observing peer activity.

Another area of interest is of course the substantial and influential work of Parten (1932) and more recently Broadhead (2004). Their descriptions of social play - '*unoccupied, isolated, parallel, associative and co-operative*' (Parten, 1932) and the analysis of the child's developing social and cooperative skills through the use of a well structured and detailed observational tool, namely *'The Social Play Continuum'* (Broadhead, 2004, p55), clearly illustrates the processes children use to ingratiate themselves with one another. Undoubtedly, when attempting to examine peer interaction, it is very difficult to simply ignore such valuable pieces of research focusing on play in the early years. However, for the purposes of this study, peer activity need not always be equated with play activities as children interact with one another in a range of situations such as sharing a meal, listening to a story and following instructions. Indeed to rely solely on the area of play in terms of its social dynamics to explore peer interaction,

although very tempting as Broadhead has presented such a useful starting point, can in my view, obscure a deeper understanding of peer activity.

Thus, even from this limited review of peer activity it is evident just how considerable this body of research is. Although I would agree with Hartup's (1996) analysis of peer activity, in that much of the work on peer interaction is inconsistent, it has illustrated that there is an opening for studying peer activity in the early years within a child's natural setting such as a children's centre. It is from within this structure that I believe we can more fully examine just what it is children do and why.

1.5 Clarifying the Approach to be taken

As a non-psychologist, existing research studies on peer activity are confusing. They are considerable in number and occur in a range of forms from experimental and correlation studies to ethnographic ones. In attempting to clarify my starting point, I was intrigued as to why there are so many different approaches to exploring peer phenomena. To confuse matters further I also wanted to consider *context*. As a practitioner, I have always been fascinated by the ways in which context impacts upon

what children do and I believe that this is at the heart of understanding peer activity. We require an appreciation of peer activity from a contextual standpoint that explores peer interaction and very much reflects the ethos of an early years educational setting. For peer activity does not take place in a vacuum, but is structured and influenced by the reality or context of that particular moment in time. I feel strongly that there is a 'window' of opportunity for further exploration of peer activity and context through small scale studies similar to this one. Thus my challenge was how to clarify these differences of approach and find a structure from which to formulate this study.

My point of departure at this stage was facilitated by Miller's (2002, 4th edn) analysis of human activity and development, which highlights that one can indeed divide research in this area into three '*world views*' namely *'mechanistic, organismic and contextualism'* (2002, 4th edn, p14). Although she presents this categorisation within a child development text book, I found her work to be fundamental in the development of a theoretical structure, when confronted with so many varied standpoints in terms of examining peer activity. Interestingly, Phillips (2011) utilised the latter as a structure to conceptualise his point of departure for explicating children's

drawings within the context of a home environment and I was intrigued to see if I could 'contextualise' peer activity within the Children's Centre.

Miller (2002, 4th edn) suggests the *mechanistic* view considers the human mind to be passive, simply waiting to 'soak up' information. Thus, the human mind can be likened to a machine. Each part has its own role to play and needs to find the appropriate locking system to enable that information to join together. Such an approach considers human development as units of behaviour which require analysis within their own right rather than exploring the whole. Thus, one can argue that the work of Bandura (1977) and Brownell and Carriger (1991) can be located under this particular *world view.*

Conversely, the *organismic approach* views child development as a process, whereby the child

> *'constructs their knowledge by actively formulating and testing hypothesis about categories of objects and the causes of event' (Miller 2002, 4th edn, p15).*

Such an approach can be applied to Piaget's (2001) understanding of child development through clearly defined stages and research developed by both Doise and Mugny (1981) as cited in Light, Melly and Clermont, (1989) and Light and Littleton (1994) to explicate peer activity. Finally, *contextualism* places the child's behaviour in its *'social-historical context'* (2002, 4th edn, p16). Miller argues that,

> *'children's patterns of development can differ from one culture, subculture or historical time to another' (2002, 4th edn, p 16).*

It is the context that is directing and formulating child development. One can associate this category with the ideas of Vygotsky (1978) and Bronfenbrenner (1977).

By using these three views one is thus reassured, as it goes some way to illustrate to the non-psychologist why some of the work previously discussed, although interesting, has a very different analytical perspective of human activity to the one proposed by this research study, except of course the view of *contextualism*. It is this approach that I believe forms the structure for developing a study of children in their educational setting. For it does not consider peer activity as units of behaviour to analyse section by section, nor does it focus on the processes of peer

activity in defined stages of development, but identifies peer interaction within a contextual framework, which reflects the current ethos and culture of early years education.

I refer to the work of Azmitia, who argues that '*context matters*' (1997, p208). She suggests that one can consider context as the *'cultural differences, societal or institutional norms and prescriptions for social interaction'* (1997, p208). As a practitioner, this is particularly relevant as one is aware of the influences that the current early years pedagogy has upon how we work with and organise children. This creates the context from which we observe peer activity and I would argue that context can be considered as containing many layers. At this point I am reminded of Cole's (1996) useful analysis of context as he refers to its Latin interpretation '*contexere*' meaning '*to weave together*' (Cole, 1996, p135). This statement implies that there are many elements to context and these collaborate together to formulate and structure the activity.

Thus, an examination of peer activity can be placed firmly within the analytical perspective of *'contextualism' (Miller, 2002, 4th edn, p16).* To truly appreciate peer activity in a way that will inform practitioners, the

context in which children are placed must not only be recognised as being significant, but actually understood as a key element in shaping peer interaction. The issue, of course, is how we can understand the forms that context can take and the peer dynamics that may be associated with it.

1.6 Operationalising the Notion of Context.

One distinct, theoretical framework that features a contextualist perspective is that of Vygotsky's (1978) socio-cultural approach to development, which will be more fully explored in the following chapter. I naturally consider this approach as the most appropriate to locate a contextual study of peers. However, this is not straightforward. As a committed educationalist of 20 years, I have had the opportunity to work with early years children aged 3 to 4 years in a range of settings. In order to adopt a contextualist approach to studying peer phenomena in a children's centre it is important that I first identify what I mean by context and, secondly, how it can be examined analytically. Of course, context can be a bland concept and can conjure up many different meanings. Indeed, Schaffer (2006) argues that the term 'context' can be

'taken for granted on the assumption that it refers to the external situations in which individuals find themselves and is thus equivalent

to the environment, with no further effort made to define and analyse it' (2006, p24).

When in contact with a group of children for 2-4 hours per day, it was very apparent that the early years experiences I provided as a practitioner also took in to account the wider context in terms of the care they received from their families. The sequence of the day not only considered the educational aspects, but also the child's personal needs. Indeed, it can be a challenge to manage both the educational elements of an early years curriculum with the more personal dynamics of family life, such as sharing a meal, and the development of self help skills. Getting the balance right in terms of providing opportunities for learning through play in varied arrangements of group activities, whilst ensuring children have some continuity with home experiences is not an easy task.

Thus, on a daily basis, I was observing children encountering a range of situations which I will refer to as *realities.* I believe these *realities* will be familiar to many other practitioners as they are used and applied to organise the daily pattern of early years educational experiences.

At this point of the study, I first discussed with colleagues my understanding of context and if they too were aware of the different situations children encounter on a daily basis. It was clear that the realties I had identified were indeed familiar to them.

For the purposes of this study, I consider that these *realities* form the contexts in which peer activity is located. Gradually, as I grew more aware and intrigued by such situations, it became clear that the realities can be organised into the following categories;

1.) ***Reality of the Children's Centre's organisational structure,*** *which reflects the broad early years context in which the child is placed in order for them to be educated,*

2.) ***Reality of the Children's Centre's formal social situations*** *as in sharing a meal or snack together, lining up, leaving and entering different parts of the building, engaging in a formal group activity to enjoy a story and participate in shared discussions,*

3.) ***Reality of the Children's Centre's structured learning activities*** *within the nursery classroom where particular resources are provided for both adult and/or child initiated activities,*

4.) *and finally the reality* ***of the Children's Centre's scope to offer free associations*** *when children can interact with one another without any set direction from the practitioner. This can include*

those occasions when the practitioner is not present, such as the child waiting in the building with their parents for the nursery day to begin.

I considered that these four realities could provide the opportunity to '*define and analyse context' (Schaffer, 2006, p24)* and go beyond the physical, external surroundings that young children find themselves in when located in a children's centre. I believe, as a practitioner, that these realities reflect both children's early nursery experiences and the context, from which one can begin to describe patterns of peer phenomena.

I propose that any research I conduct on peer phenomena in a children's centre must be respectful of these realities. Therefore, it is towards this end that my approach will not simply focus on the educational aspect of early years experiences but also broaden out to embrace other activities. I do this because I am aware of the immense challenge children face not only through encountering the ostensible curriculum guidance, but also the hidden curriculum whereby children, through the support of myself and colleagues learn where objects are kept, find their way around the building, separate from their parents and develop their self help and independence

skills. It is in recognising these realities that most influences my approach to operationalising context for this study. Peer interaction and the opportunity for '*reflexive co-construction' (Siraj-Blatchford, 2002, p10)* is present in all these realities, and, thus, to advance our understanding of peer dynamics, data must be sought across these four realities. To ignore them would produce a very limited report on peer activity which would not 'fill in the gaps' already identified in the EYFS (2007). The challenge is how best to apply analytical theory with appropriate conceptual clarity, which best reflects these different realities and, thus, allows one to analyse the data collated. Although I am keen to develop an academic study from which to examine peer activity, I am also interested in examining and developing practice. It is important that this research is an applied study, rather than being simply an academic one.

The question of how to operationalise such realities to enable a study of peer activity to be generated was thus answered from both the work of Bronfennbrenner (1977, 1994, 2nd edn, 2005) and a somewhat unusual piece of research, which on the surface appears to have very little to do with early years. Daniels (2001) first drew my attention to the latter through his discussion of applying a socio-cultural approach to context through a

range of contextual frameworks, *'distributed cognition, activity theory and situated action'* (2001, pp69-95). From this I further explored these contextual theories through the work of Nardi (1996), in relation to her attempt to understand context within the realm of human-computer interactions. Nardi's comment, that *'taking context seriously means finding oneself in the thick of particular situations'* (1996, p70), reflected very much the difficulty I was encountering. Each reality presents very different challenges in terms of analysis. On reading her work, I was very drawn to her description of the units of analysis used to define the contextual frameworks of distributed cognition, activity theory and situated action, and their potential application to the three remaining realities. If utilised appropriately, they could illuminate the core dynamics of peer activity. Thus by applying all four theories, Bronfenbrenner's (1977, 1994, 2nd edn, 2005) Bioecological Model of Human Development, the notions of distributed cognition, activity theory and situated action to these everyday realities, I now considered that I had a theoretical structure from which to locate my study of peer activity. This is summarised below.

1. *The reality of the Children's Centre's organisational structure can be explicated through Bronfennbrenner's (1977) influential model which very clearly argues that context can be defined and explored*

*from the notion of **interlinking systems namely 'micro, meso, exo and macrosystems** (1977, p514).*

2. ***The reality of the Children's Centre's formal social situations** can be analysed through distributed cognition which provides the opportunity to explore a **shared event within a co-ordinated system**.*

3. ***The reality of the Children's Centre's learning activities** can be examined through activity theory when children are engaged in episodes of mediated activity.*

4. ***Finally the reality of the Children Centre's scope to offer opportunity for children to experience interludes of free association** can be explored through the contextual framework of situated action.*

(These four ideas will be discussed more fully in Chapter 2.)

Therefore, the following research questions and objectives naturally reflect these four different notions of context.

1.7 Research Aim and Objectives

The aim of this study is to provide practitioners with an enhanced understanding of peer activity, which will extend ideas presented in the EYFS (2007) and, thus, enable the practitioner to facilitate '*reflexive co-construction'* (Siraj-Blatchford, 2002, p10). To achieve this overall aim, I have undertaken the role of research-practitioner. This provides a dual perspective of the notion of peer activity through different contextual frameworks. Although this research project brings together a range of academic theories, it is the application of these ideas to everyday practice which is significant. In order to facilitate this outcome, an ethnographic and observational approach to researching peer activity is considered to be the most appropriate methodology for this type of study.

To fully appreciate peer dynamics as a source for '*reflexive co-construction'* (Siraj-Blatchford, 2002, p10) within the day to day *realities* of a children's centre through varying contextual frameworks two fundamental questions needed to be answered.

1. How does the Children's Centre formulate the underpinning context for peer activity?

2. How might we explore peer activity through a range of contextual frameworks which reflect the *realities* children encounter every day in a children's centre?

Having identified the theoretical framework from which to examine peer activity, the research objectives are as follows:

Objective 1: *Utilise Bronfenbrenner's Bioecological Model of Human Development to help clarify the broad early years context within which peer activities can be located, studied and more fully understood.*

I would argue that in order to understand peer activity, exploring the context in which it takes place really does matter. Indeed, Graue and Walsh (1998) argue that the

> *'researchers spend less time attempting to develop grand theories and more time learning to portray the richness of children's lives across the many contexts in which children find themselves' (1998, p5).*

By utilising Bronfenbrenner's (1977, 1994, 2nd edn, 2005) model, one can illustrate the varied interlinking systems within the Children's Centre

itself, which shape the organisational reality which children experience on a daily basis. By moving from the micro outwards to the macro, one can examine how both the direct and indirect factors impact upon this reality. As a research practitioner in a familiar setting, this model presents a framework from which a critical analysis can emerge. From this broad examination of the Children's Centre itself, we thus have a platform from which to more fully appreciate peer activity through the remaining three realities.

Objective 2: *Explore and describe some patterns of peer dynamics observed within a set of daily realities, utilising the conceptual framework of distributed cognition as found in cognitive science.*

Distributed cognition provides the opportunity to explore the *reality of formal shared events,* where knowledge is distributed to the group through a co-ordinated system. This may be an activity led by an adult. By applying this framework to events observed within the *microsystems* identified in objective 1, it is my intention to illustrate the range of situations in which children's peer activity can be further enhanced through the notion of distributed cognition. Thus, I intend to analyse peer activity through such events as sharing a meal and sharing in co-ordinated activities such as

rhyme/ story sessions through the application of Nardi's (1996) unit of analysis for distributed cognition namely the '*functioning of the system*' (1996, p77). This will involve identifying the factors which maintain the coordination of the system and allow for knowledge to be distributed to the children. Through this process, one can begin to observe how children *align* themselves to one another, *communicate* information to the group and construct knowledge.

Objective 3: *Explore and describe some patterns of peer dynamics observed within a set of daily realities, utilising the conceptual framework of cultural mediation as found in activity theory.*

Through the contextual framework of *activity theory,* one can observe the *reality of structured learning activities* as children experience *episodes of mediated* activity in the *microsystems* identified in objective 1. These can include both child-initiated and focused, goal-orientated activities. Through the application of Engstrom's Activity Theory Triangle as cited by Cole (1996, p140), one can map onto the activity itself the varying interlinking entities, most notably mediation, which argues that one does not interact directly with the world around them, but indirectly through the utilisation of various mediatory devices. I intend to examine how three

mediatory devices, namely artefacts or tools such as classroom resources, semiotic features, for example, language and communication systems and the personal support provided by both the adult and children, are employed in structured mediated activity. Such mediated activity will, I believe, present unique patterns of peer activity which contrast with the peer dynamics observed within coordinated, often adult led, activity analysed through the notion of distributed cognition.

Objective 4: *Explore and describe some patterns of peer dynamics observed within a set of daily realities, utilising the conceptual framework of situated action as found within cognitive science.*

The contextual framework of situated action draws one's attention to the reality of *interludes of spontaneous activity* when children freely engage with one another as they interact with their surroundings. By applying Nardi's (1996) unit of analysis '*moment by moment interactions' (1996, p71)* between the individual and their environment, within selected *microsytems* it will be possible to observe peer activity as it occurs when the children have no set directed goal, for this emerges out of the activity itself. I also intend, within the notion of situated action, to apply the ideas of '*Legitimate Peripheral Participation'* (Lave and Wenger, 1991). This provides

a framework from which to consider how children become involved in an activity as they seek membership of the nursery class community. Situated action presents a viable framework from which to examine patterns of peer activity in the reception area and within the nursery classroom environment itself. Such findings will, I believe, present a contrast to the more goal-orientated frameworks of distributed cognition and activity theory.

Each of these objectives will form the basis of four separate studies where peer activity can be more fully explicated.

1.8 Conclusion

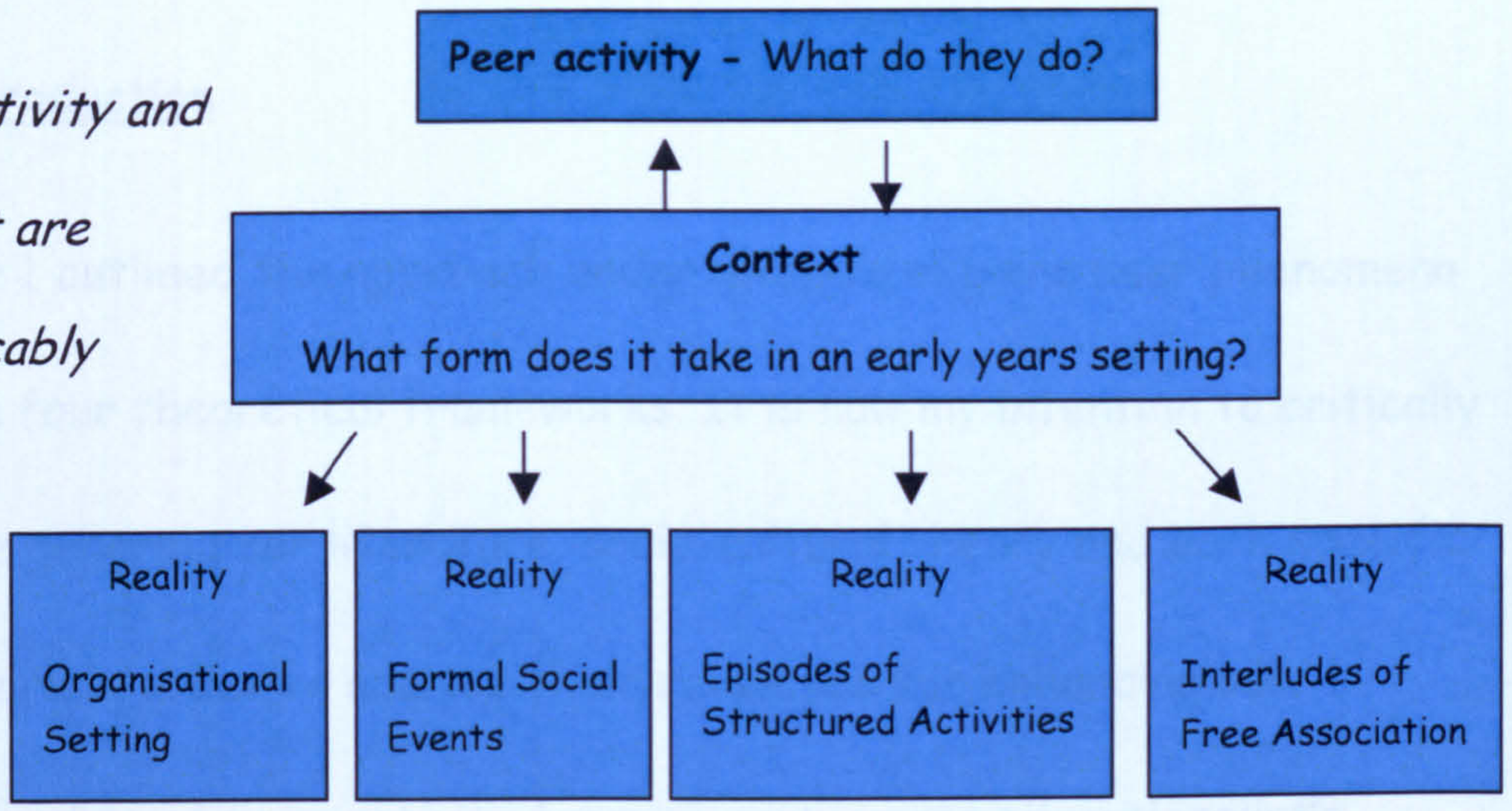
As a research-practitioner, I am proposing that by applying four different analytical contextual frameworks to reflect the daily realities of a children's centre, it will be possible to enhance our understanding of not only peer activity, but also how it manifests itself through peer interaction and emerging patterns of interaction by reflecting upon the peer dynamics. From this, one can begin to examine *'reflexive co-construction'* (Siraj-Blatchford, 2002, p10). Siraj-Blatchford (1998) argues that in order to implement an effective curriculum,

'staff need time to develop a shared understanding of children, curriculum learning and the role of the adults in supporting learning' (1998, p3).

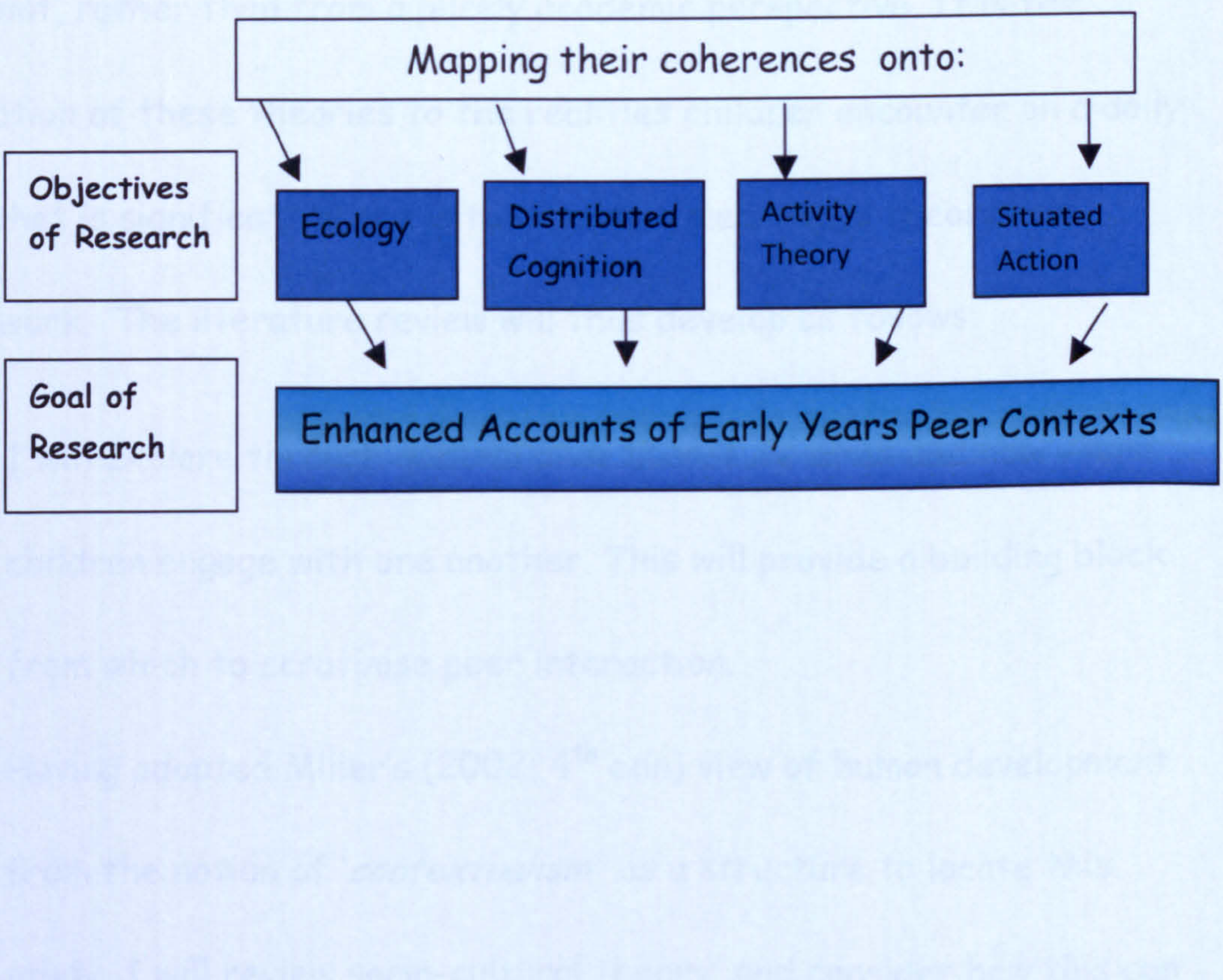
I would argue that to achieve this shared understanding of children, examining peer activity within the early years educational setting itself is essential. To address this issue the following research contains four studies focusing on ecology, distributed cognition, activity theory and situated action. Each of these theories will be more fully explicated in the next chapter. Whilst taking on the role of research-practitioner in a single setting can only provide a starting point to this topic, it is an area definitely worth exploring if we are to ensure that we further enhance practitioners' understanding of peer activity. To illustrate and summarise the structure underpinning this study, the diagram (Fig 2) on the following page identifies the interplay between peer dynamics, context/ reality and the selected contextual frameworks.

Fig 2: Peer Activity and Context

Peer activity and context are inextricably linked!



OPETRATIONLISE through contextual frameworks



CHAPTER 2: Literature Review

2.1 Introduction

Chapter 1 outlined the approach undertaken to explore peer phenomena through four theoretical frameworks. It is now my intention to critically evaluate general peer literature, socio-cultural theory and each specific framework in order to analyse their relevance for enhancing our understanding of peer activity from an early years educationalist's viewpoint, rather than from a purely academic perspective. It is the application of these theories to the realities children encounter on a daily basis that is significant if one is to develop a meaningful theoretical framework. The literature review will thus develop as follows:

- I will explore through general peer literature when and how young children engage with one another. This will provide a building block from which to scrutinise peer interaction.
- Having adopted Miller's (2002, 4th edn) view of human development from the notion of '*contextualism*' as a structure to locate this study, I will review socio-cultural theory and consider how this can be applied to the context of a children's centre.

- Finally, I intend to analyse in general terms the theme of context which will form the foundations for critically evaluating how Bronfenbrenner's Bioecological Model of Human Development, distributed cognition, Engstrom's (1999) Activity Theory Triangle and situated action can be applied to the four realities identified within the Children's Centre highlighted in Chapter 1.

2.2 General Peer Literature

The development of social relationships has always been of great interest in the field of developmental psychology. When examining general peer literature, peer phenomena is summarised by, firstly, describing the child's primary relationship with their parents and the significance this has for later life and, secondly, how peer relationships emerge in childhood.

Bowlby's (2005) attachment theory is the most appropriate route for examining the significance of the child's primary relationship with their parent. According to Bowlby (2005), the child will first form an attachment with its main caregiver. It is from this relationship that the child has the security to begin to explore its surroundings. His work was further

enhanced through Ainsworth's et al (1978) secure, anxious-resistant insecure and anxious-avoidant insecure, categorisations of attachment. Her argument that one can define a child's level of attachment with its parent by analysing their attachment behaviour during the procedure known as the 'Strange Situation' presents a strong argument for the significance of attachment. Although, the categorisation has its limitations for it only focuses on observing behaviour during stressful situations, as there is no opportunity to compare the attachment relationship during less stressful moments, it brought to the fore just how influential the child/parent relationship is, in terms of understanding child behaviour. Indeed, attachment theory suggests that the child's relationship with the main carer will not only influence the child's personality and character, but will also impact upon how the child relates to others in the future. This view has naturally been challenged. For a child's personality and character is not solely influenced by the shaping of the child/parent relationship, but is also heavily influenced by peer pressure, whereby the child modifies their behaviour to accommodate the demands of its peer group (Harris 1998). But, I would argue that one cannot become aware of one's peers and become influenced by their behaviour, if they do not have the experiences of relating to another which is naturally achieved through the child/parent relationship.

Despite its critics and limitations, attachment theory presents a convincing argument for the child/parent relationship and has undoubtedly influenced maternity, child and educational services. Indeed researchers continue to understand just how important this relationship is for not only shaping personality, future relationships, but also for cognitive functioning (Lippe et al, 2010). In terms of understanding peers, attachment provides a strong foundation from which to understand peer phenomena. For through the child/parent relationship the child becomes aware of another person, comes into contact with and experiences others, and is thereby ready to engage in social relationships. Peer relationships become an important feature of the child's social development, so much so, that during adolescence we begin to observe a tension in the parent-child relationship. The parent to some extent is now in competition with their child's peer group as peer relationships figure strongly in the development of the child, particularly as they reach adulthood. Therefore, what is the role of early years in the emergence of social relationships?

Lowe Vandell, Nenide and Van Winkle (2008) argue that progress over the last 30 years in three areas of work, notably the developmental stages in peer relations; factors which impact upon such relationships; and how these

in turn affect other areas of child development; has markedly increased our understanding of early peer relationships. I would certainly agree that this is the case and initial exploration of general peer literature suggests that children are inherently sociable from an early age. Can we identify a time when they begin to develop social relationships with their peers?

Child development studies have indicated that newborn infants express an interest in observing faces and facial patterns (Fantz, 1963). More recently research has indicated that as young infants visual attention skills mature, they demonstrate at 7-8 months a preference for moving faces rather than static images (Ichikawa et al, 2011). This interest in human faces is one indication of the child's growing awareness of others and naturally facilitates human interaction.

Young infants are social beings and *'from the very beginning, infant and parent mutually influence each other'* (Schaffer, 1996, p112). The newborn seeks physical contact with their parents and this relationship is very much regulated by the adult's interaction with the child. But what is motivating the child's interest in their parents? Of course, one would suggest that basic survival instincts come into play, in that the parents provide warmth,

security, comfort and food, but is culture or context also significant in this relationship? Trevarthen (1995) argues that the motivation behind this behaviour is the child's need to become part of, and to understand its culture. A child cannot achieve this in isolation. According to Trevarthen (1995)

> *'being part of a culture is a need human beings are born with, whatever its contents, is a natural function. The essential motivation is one that strives to comprehend the world by sharing experiences and purposes'* (1995, p87).

Thus, the need for the child to enter his/her culture can only be fulfilled through interaction with others. Tomasello (2000) extends this further by suggesting that peer collaboration is driven by a more fundamental need concerning the survival and future development of the immediate community.

But when does this interest extend beyond the immediate family? Mueller and Vandell (1979) suggest that young infants begin to express an interest in each other as early as 2 months. At 6-12 months children frequently

exchange smiles, vocalizations and touches in order to interact with one another (Lowe Vandell, Nenide and Van Winkle, 2008). This interest in others becomes more specific as children from as early as 18 months, develop preferences for particular playmates (Hay, Payne and Chadwick, 2004).

The opportunity for communication between peers according to Tomasello (2000) has its starting point during what he refers to as the *'nine month revolution'* (2000, p61). This is an important stage when '*joint attentional interaction'* (2000, p97) is beginning to emerge. His work is particularly interesting as it illustrates how this evolves as the child matures and the significance of this relationship with, firstly, the parents, and then with the wider social group. He argues that this forms the starting point for collaborative learning. This process is essential if the learning is to be established and maintained. Thus, both the parents and the desire to become culturally developed, provide both the context and motivation behind such behaviour. Culture is important if we are to understand adult and child activity. Indeed, Tomasello (2000) states that the child's ability to view others as *'intentional agents. This ability does not emerge in a vacuum, of course , but emerges in situ' (2000, p96).*

Thus, the context in which activity occurs between parent and child is important and I would argue that this concept can be extended to peer activity. Tomasello's work on '*joint attentional scenes*' (2000, p97) between the adult and child are particularly important for exploring peer activity.

He suggests that '*joint attentional scenes*' have a number of key features which provide opportunities for the:

- *social-cognitive grounding of early language*
- *understanding of language through the adult's use of linguistic symbols*
- *role reversal involving imitation whereby the children can rehearse their use of language and linguistic symbols (2000, p96).*

I would argue that these elements which reinforce Vygotsky's understanding of the relationship between culture and cognitive development can also be present when one examines peer activity. This can be further explained when one examines Tomasello's understanding of how children view the role of others. He suggests that there are three clear developmental stages; (*i) 'animate agents, (ii) intentional agents and (iii) mental agents'* (2000, p179). It is this final term, *'mental agents'*, which is particularly important for understanding what makes peer relationships possible as children enter their third year of life. This provides us with

the opportunity to consider how children view each other, not just as a friend or play mate, but as a socio-cognitive tool to support their view of, and involvement within, an activity. Thus, when considering peer activity, it is not simply what they do which is important but how they utilise one another as they explore the activity.

As an early years practitioner, the ability of children to read each other's intentions becomes very apparent as they begin to engage with one another on a regular basis. Practitioners often comment on children sharing their ideas through actions and words. Their interest in one another is very visible as they watch and imitate their peers. We can observe how they tune into one another as mental agents as a means to collaborate. Gottman (1986) argues that from a young age children are required to coordinate their responses as they interact with one another in order to sustain their peer relationships.

What conclusions can be drawn from general peer literature? Firstly, it enhances one's awareness of the child's need to embrace their culture which supports Vygotsky's (1978) notion of the importance of the cultural context through mediation as it interacts with the child's *intra identity*.

Thus, context is defined under the heading of cultural factors motivating peer interaction. For the practitioner, this reinforces the importance of the social arena for cognitive development. This idea is very much supported from the evidence that young infants express an interest in others, which becomes more established and sophisticated as the child matures.

Secondly, Tomasello's (2000) understanding of children viewing others as '*mental agents*' (2000, p179) may also provide the theoretical framework from which to examine peer activity. This theme is of great significance to the practitioner because it draws one's attention to the importance of taking into account how children communicate their ideas to one another. It suggests that this interplay has a crucial part to play in the development and education of young children.

Finally, to understand peer activity within the context of a children's centre and to consider the interplay between context and peer activity, further exploration of context is required.

2.3 Socio-Cultural Approach

In my view, to understand peer activity in the early years, one is required to acknowledge the significance of the social situation that young children find themselves in. Even Piaget (1951) for whom social influences on cognitive development is not a central feature of his theory, suggests that *'social life is a necessary condition for the development of logic. We thus believe that social life transforms the individual's very nature'* (Piaget, 1951, p239). This theme has been explored further by researchers following a Neo-Piagetian framework through the notion of 'Socio Cognitive Conflict' (Doise and Mugny, 1981), as cited in Light, Melly and Clermont (1989, p139). As peers work with one another they challenge each other's existing perspective, thus resulting in the children gaining a deeper understanding of the problem under review as they decentre from their own cognitive ideas.

However, the notion of 'Socio Cognitive Conflict' does not present a robust framework from which to understand peer activity in the early years, for it fails to appreciate how a practitioner encounters each child as a whole person within a culture.

In Chapter 1, I selected Miller's (2002, 4th edn) notion of '*contextualism*' as the most appropriate view of human development from which to locate a study of peer activity in the early years. In light of this decision, it seems most befitting to examine socio-cultural theory, as a theoretical framework, for examining peer activity. Since many children from the age of three spend a considerable amount of time in an educational setting, it would seem irresponsible not to acknowledge that influence as an aspect of the child's culture. In order to evaluate socio-cultural theory as a framework to underpin a study on peer activity, it is necessary to firstly consider Vygotsky's original theory and, secondly, review its development by a new generation of socio-cultural theorists.

Undoubtedly, Vygotsky's contribution to understanding child development is his discussion on the importance of culture and the interaction of the individual with a range of artefacts which allows that individual to prosper within its own culture. Early years practitioners find themselves in a privileged position in that they are working with a child at a time when they are exploring their own culture.

Fundamentally for Vygotsky, cognition is social in its origin. Indeed he argued that,

> *'socially meaningful activity may serve as an explanatory principle in regard to, and be considered as a generator of, human consciousness' (Kozulin, 1998, p8).*

This contrasts sharply with a constructivist Piagetian (2001) view of cognitive development. From this perspective, knowledge is constructed as the child, an active participant, interacts and discovers their immediate environment, and evolves through four sequential periods of development. Each stage namely sensorimotor, preoperational, concrete operations and formal operations, is defined by particular processes of mental organisation which shape the ways in which children construct knowledge. Central to his theory is the notion of schemes or schemas, which refers to how children actively construct and categorize their knowledge of their immediate surroundings. This is achieved through the use of an inborn mental process referred to as *organisation*. Thus the child is able to construct generalisable schemes from specific experiences.

According to Piagetian theory, to facilitate *organisation* and challenge existing knowledge, the child as he/she encounters new experiences,

utilises the mental process of *adaption* which is defined by three further mental structures - *assimilation, accommodation* and *equilibrium*. It is through these three cognitive processes that the child can actively *assimilate* or absorb selected experiences, *accommodate* or challenge existing knowledge, which will finally result in a balance or *equilibrium* of tension between the emergence of new knowledge with pre-existing schemes. Through these cognitive mechanisms the child can actively restructure knowledge and improve skills, thus resulting in cognitive development.

Piagetian theory has influenced current early years pedagogy which is clearly evident in the EYFS (2007). The practitioner is guided to ensure appropriate resources are made available to assist the child in their interaction with their immediate environment at their appropriate cognitive developmental level. Indeed, it is important to affirm that the staged process of development is a well embedded feature of principled early years practice. But Piagetian theory fails to fully ascertain the significance of social interaction amongst peers for cognitive development, which is a fundamental feature of early child development studies. As has already been established learning for young children is not a solely solitary or

individual process and this is clearly recognised within socio-cultural theory.

For Vygotsky, the '*learning process has a socio-cultural character from the beginning*' (Kozulin, 1998, p3). Higher mental functioning is socially orientated and, unlike Piaget, Vygotsky maintained that social interaction is fundamental to cognitive development. This socio-constructivist notion of cognition can be more fully explored through Vygotsky's (1978) notion of the 'zone *of proximal development*' (zpd), which is fundamental to extending a child's cognitive skills. He defines this as,

> '*the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers' (Vygotsky, 1978, p86).*

To understand how the social processes facilitate '*the zone of proximal development*', one needs to explore Vygotsky's concept of internalisation of knowledge through social interaction. Vygotsky argues that cognitive

development can be understood from two planes or domains, namely the inter and intra personal planes.

> *'Every function in the cultural development of the child appears on the stage twice, in two planes, first, the social, then the psychological, first between people as in intermental category, then within the child as an intramental category ' (Vygotsky 1931) as cited in Backhurst (2007, p53).*

From this statement it is clear that mental functioning first occurs at the point of interaction between the child and the adult/more able learner. Through this relationship, the adult guides and supports the child and thereby concepts become *internalised* to feature, secondly, at the *intrapersonal domain*. When one relates this to early years, many practitioners would observe these ideas again and again, as children, in the interpersonal plane, engage in chatter with each other and with the adult. Ideas occur in the public forum as they are rehearsed, and explored before becoming *internalised* in the intra personal plane. It is from this idea that the notion of *co-construction* is so important for cognitive development as highlighted in the REPEY (2002) report discussed in Chapter 1. However, at the heart of this relationship linking the 'inter and intra' domains through internalisation, is mediation. For Vygotsky, the adult or more able

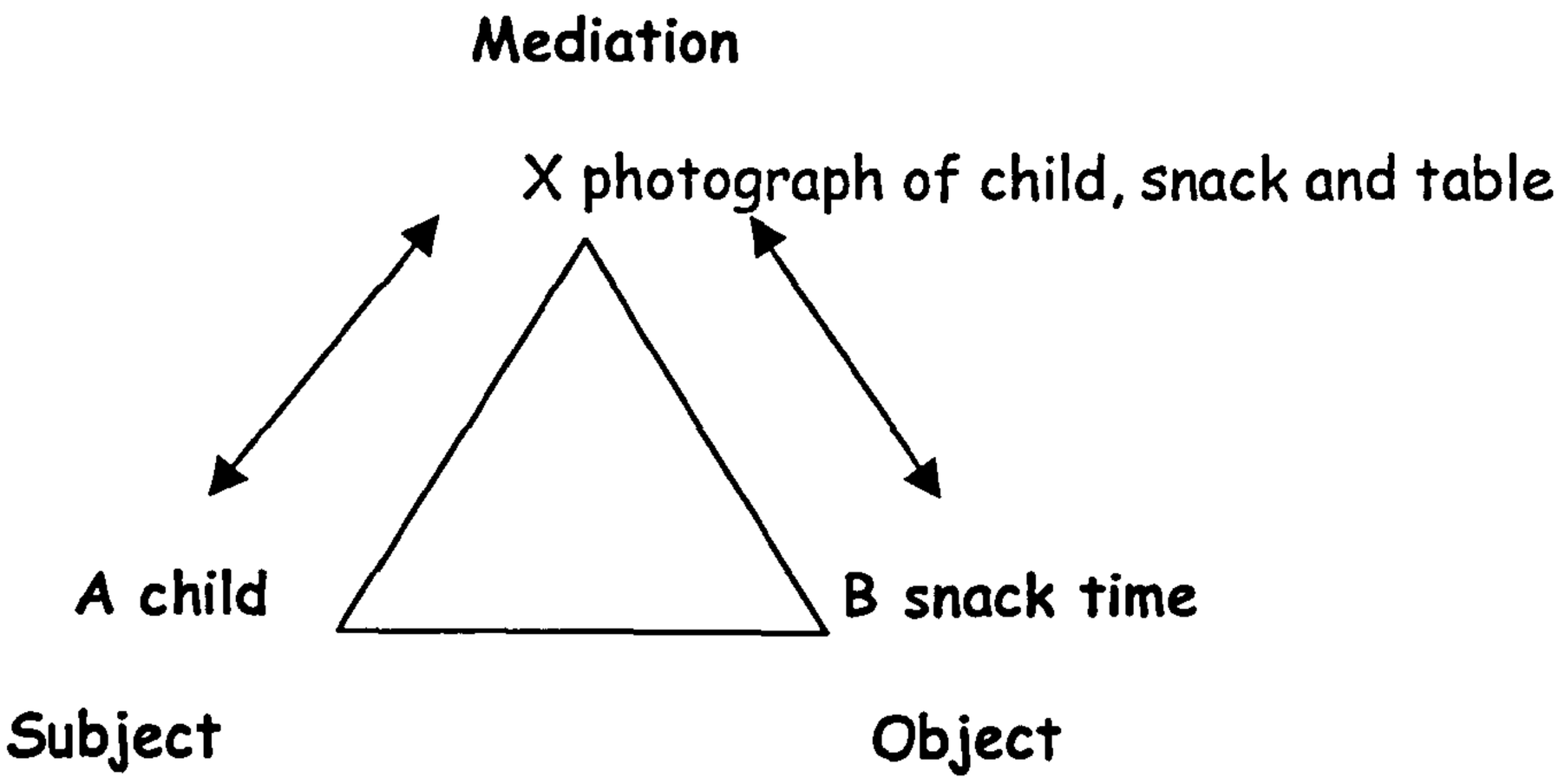
learner can utilise a range of '*cultural tools*', which can include psychological 'tools' such as writing, counting and, most notably, language, as well as technological 'tools' such as books, clocks, calculators and computers, to name but a few.

Wertsch's (2007) summary of Vygotsky's concept or mediation has proved particularly useful when applying this idea to the nursery setting.

> *'Instead of acting in a direct and unmediated way in the social and physical world our contact with the world is indirect or mediated by signs' (2007, p178).*

The notion of direct or unmediated learning versus indirect or mediated learning can be explored by applying Vygotsky's (1981) as cited in Wertsch (2007, p179) mediation triangle to an activity very familiar to practitioners. On a daily basis, practitioners may use many different mnemonic devices to enable children to remember instructions and ideas. One such device is a simple photograph, which practitioners use to prompt a child's memory to sit at the table at the appropriate time of the day for snack. This can be illustrated as follows (Fig 3).

Fig 3: Mediation through a mnemonic device - a photograph



The child, rather than directly attempting to remember the relationship between himself (subject) and the snack table (object), which can be defined as A→B (subject→object), now makes a new connection via the mediation of the photograph of the snack, A→X (subject→mediation - photograph), and X→B mediation→object). At the *interpersonal domain*, the child immediately remembers that it is time for snack. Gradually, the child will no longer need the photograph as a prompt, as the concept of snack time becomes *internalised* and now occurs at *the intra personal* domain. The practitioner uses many different cultural tools within a day to support the child to overcome their limitations in terms of memory and the sequencing of events.

Although I believe Vygotsky's ideas are of value to understanding peer activity, it does present a number of challenges. Firstly, the notion of the

'*zone of proximal development*' although appealing and relevant to early years education, is somewhat vague as it does not examine how the adult or more able learner should through social interaction guide or facilitate, the child, to greater independence. Secondly, Vygotsky offers very little description of when a child's improvement within their zpd maybe vulnerable to regression if an adult or more able learner fails to continue to support the child's progress effectively. Finally, Vygotsky does not offer a structured mechanism from which to measure the distance from the child's actual level of development to their potential level of cognitive development. Such a framework could assist the more able learner in how they can modify their levels of support to the child as they attempt to gain a greater independence in their learning.

Despite these concerns Vygotsky's theories continued to inspire other socio-cultural theorists to examine the social nature of cognitive development, and have to some extent have attempted to tackle some of the concerns identified above. For example, Bruner (1983) has utilised the notion of '*scaffolding*' to illustrate the adults role when supporting children's learning; while Rogoff (1993) has introduced the theme of *'guided participation'* as a means to understand the ways in which an adult guides

the child through the *'zone of proximal development.'* Here we see the adult tuning into the child's developmental level, responding appropriately and thereby selecting the most suitable cultural tool to guide and support the child.

Equally, much work has also been undertaken by such writers as Wertsch (2007) and Kozulin (1998) to enhance our understanding of mediation. Activity theory as explored by Engstrom as cited in Cole (1996), extends the notion of mediation beyond the subject and object to consider their relationship with the elements of '*rules, community and division of labour*' (Cole, 1996, p140). Such a notion allows one to consider the many facets which feature within mediated activity. Finally, the cultural dynamics shaping the child's interaction with its environment is further explored through Cole's (1996) analysis of culture and human development.

Through the ongoing work of Neo-Vygotskians, socio-cultural theory continues to be relevant to early years education. Many researchers have explored cognitive development amongst peers through collaboration. Indeed Azmitia (1992) Gauvain and Rogoff (1989) have identified that children are able to solve problems through collaborative activity and more

significantly the less able child in the group benefits the most from such collaboration. More recently, Hallam, Lee and das Gupta's (2011) work on how young children engage socially with one another as they represent their ideas through pictures and drawings has captured a fascinating insight into how practitioners can examine children's drawings as a mediatory tool to understand the child's thought processes and thereby facilitate the practitioner to extend the child's cognitive level through social interaction.

Thus Vygotsky's theories continue to illustrate that social interaction is essential for cognitive development and acknowledge the importance of the child's natural setting as a context for this process. A contextualist view through a socio-cultural understanding of human development can be defined as the most effective method for beginning to understand peer activity. However, a socio-cultural approach is not enough to establish a theoretical framework to study peer activity through context. Further exploration of context is required, but defining it is not an easy task.

2.4 Notion of Context

In chapter 1, I have established the importance of context as a framework for understanding peer activity. My point of departure at this stage was Cole's (1996) theoretical exploration of context which he refers to as '*the connected whole that gives coherence to its parts*' (1996, p135). For me, as a practitioner, his work is particularly appealing as he argues that context cannot be limited simply to the environment in which the activity is located. Once again I refer to his use of the Latin term '*contexere*' (1996, p135) meaning to '*weave together*', which creates an image of different entities *weaving together* to create a whole. This is very much reflected when we revisit the idea of the four realities children encounter on a daily basis. The children's educational experiences are organised through the functioning of the Children's Centre. They may come together in a group for more formal social situations, then explore structured activities and finally have opportunity to freely associate with their peers. These do not occur in isolation but do indeed *weave together* to form the nursery session.

Thus, it is clear that one cannot describe context as a single entity. It is far more dynamic and complex than this. I have argued that in order to

understand peer activity, context must not be ignored. Cole's (1996) notion of *'weaving together'* focused my attention on Bronfenbrenner's (1977, 1994, 2nd edn) Bioecological model, which suggests that one can view human growth within a series of interlinked systems. Starting from the *microsystem,* one is encouraged to focus on the inner structure and gradually move outwards to the macro-system. The application of this idea on a practical level to the Children's Centre was once again very much supported by Cole's (1996) exploration of the idea. He designed a structure applying the principle of ecology to the classroom. He identified the pupil-teacher exchange within the lesson as being at the heart of the model, and gradually moved out towards the organisation of the school and then onto surrounding community. This representation of the model provided a very realistic structure from which to begin to explore the Children's Centre, not as a single but as a multilayered unit of analysis. Thus, Bronfenbrenner's model naturally provided a framework from which to examine the reality of the Children's Centre organisational structure, and thus begin to clarify the broad early years context within which peer activities can be located.

However, I would argue that this model alone is not enough to provide a contextual framework from which to examine peer phenomena. Cole (1996) suggests that one *cannot* simply view context as,

> *'that which surrounds. It is rather a qualitative relationship between a minimum of two analytical entities (threads), which are two moments in a single process' (1996, p135)* .

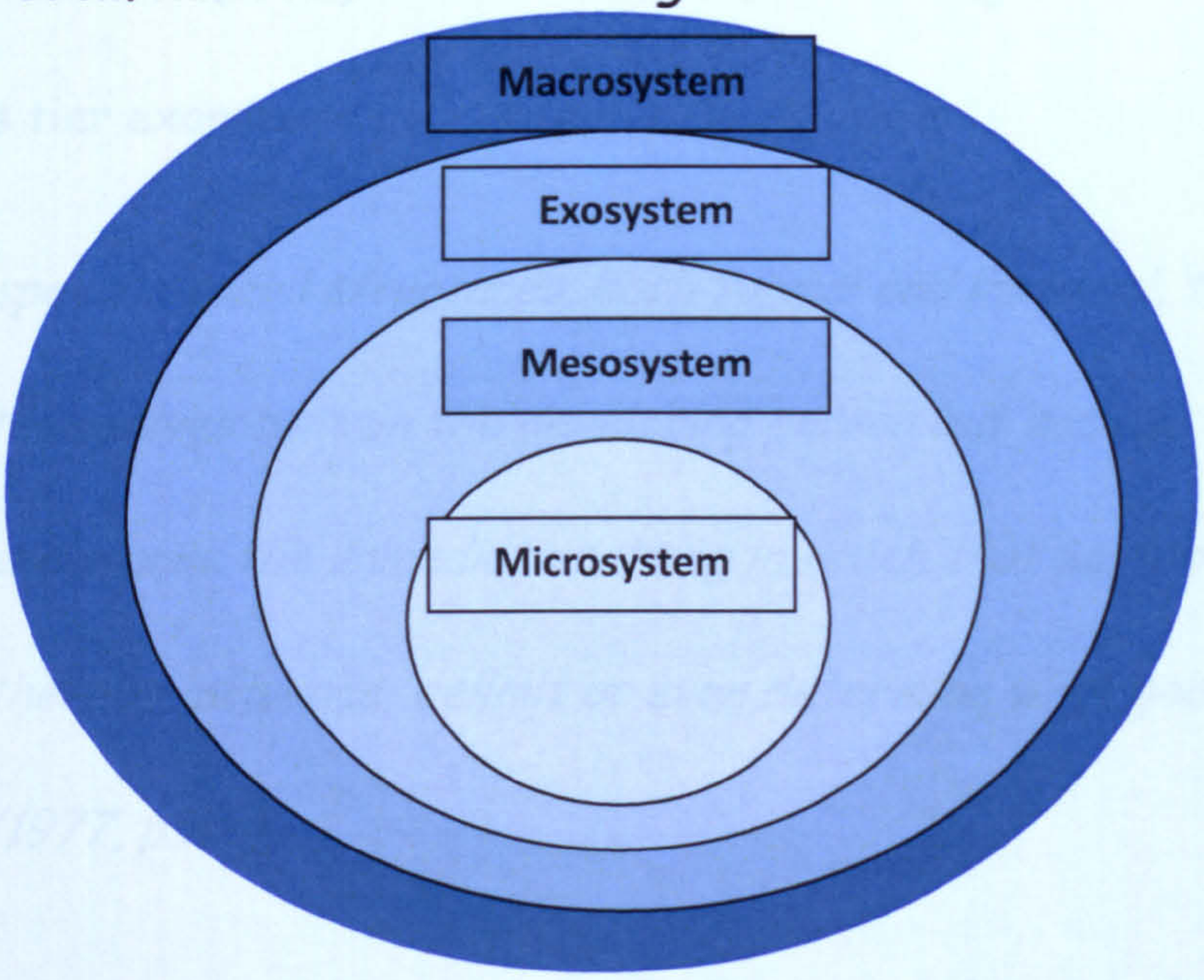
When one applies this statement to peer activity within the setting, it reveals that context is far more complex than simply considering the range of influences at play which mould the development of the individual, although this is a starting point. Other '*threads*' or *'analytical entities'* (Cole, 1996, p135) need further exploration to fully understand context and the peer activity it creates. My interpretation of this statement is that the realities of *formal shared events* examined through distributed cognition, *episodes of structured learning activities* explored through activity theory and *interludes of free association* explicated through situated action allow one to examine their '*threads or analytical entities*', (Cole, 1996, p135) as they, too, reveal unique aspects of peer activity.

Each contextual model or framework and its application to the appropriate reality from which one can begin to examine peer activity, will now be discussed.

Bioecological Model of Human Development

Bronfenbrenner acknowledges much of his work to his mentor, Kurt Lewin, who viewed the ecological environment as a series of '*nested and interconnected systems*' (Bronfennbrener 2005, p45). Bronfenbrenner utilises Lewin's ideas to create an ecological model, which challenged existing child development theories, that focused solely on examining the child, either in the context of the family unit or in unfamiliar contexts, for only a few moments at a time. He argued that children do not develop in isolation, but are influenced by many differing factors which directly and indirectly impact upon the child. Thus, he not only recognised the importance of the child's immediate surroundings which they encounter on a daily basis, but also those elements such as government policy, current health practices and adult employment, which indirectly impact upon the child's development. To counter-balance child development theory, he introduced his notion of layering, or '*tiers of ecology*' (2005, p17), to describe and explore child development (Fig 4).

Fig 4: Bronfennbrenner - Bioecological Model of Human Development



What is appealing about his work is his metaphorical use of the term 'ecology'. Each system or layer has a specific identity or function which very much defines the context at that particular level. Bronfenbrenner defines the microsystem as *'a pattern of activities, roles, and interpersonal relations' (2005, p148)* between the individual and the immediate setting or environment in which they are placed (e.g. 'home, nursery'), and goes on to suggest that

> *'a setting is defined as a place with particular physical features in which the participants engage in particular activities'*
>
> (Bronfenbrenner, 1977, p514).

The *mesosystem* is described by Brofenbrenner as a '*system of micro-systems'* (1977, p515). The next layer namely the *exosystem,* according to

Bronfenbrenner (1977) extends one's understanding of the mesosystem, for this tier examines

> *'specific social structures, both formal and informal, that do not themselves contain the developing person but impinge upon or encompass the immediate setting in which that person is found, and thereby influence, delimit or even determine what goes on there' (1977, p515).*

Finally, the *macrosystem* which Brofenbrenner defines as the '*blueprint* (1977, p515) explores how the national picture structures the overlying model and thus shapes microsystems at the centre of the model.

Bronfenbrenner does successfully achieve his aim of broadening out one's understanding of child development. His definition of each system or layer makes it extremely adaptable and, consequently, it has been utilised in many different forms to explore child development from varying professional perspectives, such as health and education. Indeed, the Effective Pre-school and Primary Education Project 3-11 – (EPPE 3-14) (DCSF, 2003-2011) longitudinal study is strongly influenced by Bronfenbrenner's notion of micro, meso, exo and macro systems of ecology.

The project successfully identifies and examines the impact of six main

elements namely, a) individual characteristics associated with the child, e.g., gender or birth weight, b)family characteristics, e.g., parental education, home language, c). home learning environment (HLE), i.e. learning opportunities in the home, d). the neighbourhood/community characteristics, e) pre-school attendance and experiences and f) primary school experiences, upon early child development. The continued application and relevancy of Bronfenbrenner's Bioecological model to current educational research has thus influenced my decision to apply his theory to gain an overview of the interconnecting contexts which shape the Children's Centre. From this, one can then begin to examine the broad opportunities for peer activity.

Bronfenbrenner's theory is underpinned by his notion of '*Process, Person, Context, Model*' (1994, 2nd edn, p38), which is defined through two propositions. In my view these are fundamental to understanding the context of the Children's Centre. *Proposition 1* argues that human development occurs through gradually more

'complex reciprocal interaction between an active, evolving bio-psychological human organism and the persons, objects and symbols in its immediate environment' (Bronfenbrenner, 1994, 2nd edn, p38).

These interactions, which take place on a regular basis over time within the '*immediate environment*', are defined as '*proximal processes*' (Bronfenbrenner, 1994,2nd edn, p38). This concept can be applied to the Children's Centre when one recognises the importance of interaction between the individual and their environment as a source for human development. I propose that peer activity should be explored by examining the interaction between the individual and the context in which it is placed. As an early years practitioner, this is particularly revealing. One can relate this idea to the daily activities, whereby children interact with their parents, a practitioner and one another.

Proposition 2 goes on to explore the elements which can be identified within the *'proximal processes'*, namely *'form, power, content and direction'* (Bronfenbrenner, 1994,2nd edn, p38). These can be presented in many different ways according to the interactions between the individual and the environment. Once again, my experience of early education allows me to draw on examples where proposition 2 is particularly relevant. If we take the scenario of children arriving at the Children's Centre with their parents in preparation for the nursery session to begin, we can utilise '*form, power, content and direction*' to analyse this activity more fully. The *form*

describes the activity, thus children are arriving and waiting. Their interactions with their parents can be explained from the notion of *power*. When they enter the building at the start of the day, the children are very much in the role of daughter/son and very much in the care of the parent. However, when they enter the classroom the role in terms of power now changes. They are now learners in the care of the practitioners. The *content* examines the range of resources used to facilitate the activity of waiting which contrast sharply with those resources used to support learning located in the nursery classroom. The *direction* of the activity has changed from waiting to learning.

Propositions 1 and 2 allow one to not only identify the interaction between the child and their environment at the micro level, but also enable one to consider the nature of these interactions. Thus the *tiers of ecology* provide one with the ability to not only embrace the general context of statutory early years provision centred located in the macrosystem, but also consider how this impacts upon the children in their daily lives within the nursery through the micro system.

However, for the purposes of this study on peer activity, the model does not provide the option to examine peer activity in any depth other than to identify how the various tiers of ecology influence the opportunities for peer interaction. Although the model presents an overview of child development itself, it lacks detailed units of analysis other than its notion of *form, power, content and direction* to examine child interaction within the microsystems. It provides the perfect model for exploring the *organisational reality* of the Children's Centre as it impacts upon the child, but does not go any deeper to explore the intricate interplay of peer activity and context. The '*process, person, context model' (1994, 2nd edn, p38)* does not allow one to examine how children interact with one another within a system, nor how mediated learning shapes peer phenomena and, finally, it does not reveal peer interaction moment by moment as it evolves. Further enhancement is required if we are to fully appreciate the link between reality and peer activity. This, I believe, will be achieved through the application of the contextual frameworks of distributed cognition, activity theory and situated action.

Distributed Cognition

On a daily basis I have observed activities whereby the children come together as individuals to participate in a joint activity. One example of this is the telling of a story. Some children take centre stage in the presentation of the story through the use of puppets or adding their own experiences and ideas. Other children take on less noticeable roles and yet their comments are encouraged. The practitioner manages this session through sensitive interaction with the children. Thus, what occurs is a *coordinated activity*. To appreciate this reality of formal interaction it makes sense to analyse it from the perspective of a system and not simply as a group of individuals. Within this reality, the practitioner can identify with Vygotsky's notion of the interpersonal occurring before the intrapersonal at this stage of cognitive development. Although it may seem bizarre to consider distributed cognition as a framework for exploring peer phenomena through context, when one applies the general principles of distributed cognition it becomes clearer that this idea is very relevant to early years education. For children, on a daily basis, experience the reality of being involved in an activity as part of a group, rather than simply as an individual.

Distributed cognition provides a framework where one can study those operations in life which involve shared or distributed cognitive processes. It seeks to understand a system whereby human activity is coordinated by an artefact which may be a set of tools, a piece of equipment or indeed an individual. The unit of analysis is the 'functioning of the system' (Nardi, 1996, p77) itself.

Each individual may have a particular activity to complete which is part of a whole in terms of achieving the group objective. Practitioners not only lead this *event,* but also sit within it supporting children as they take on particular roles. Knowledge is presented and constructed through shared activity. Thus, distributed cognition, quite simply, is a social activity.

Daniels (2008) suggests that distributed cognition can be

'discussed in terms of a cognitive system comprising of individuals and the tools or artefacts that are used when particular tasks are undertaken' (2008, p77).

Distributed cognition focuses on what is *'happening between brains' (Daniels 2008, p77).* A further source of explanation with regard to distributed

cognition, can be found from Hollan et al (2000) as cited in Daniels (2008) who suggests that what defines distributed cognition as opposed to individual cognition, is that

> *'it extends the reach of what is considered beyond the individual to encompass interactions between people and the resources and materials in the environment' (Daniels, 2008, pp77-78).*

If we refer back to the idea of storytelling, rather than this occurring with the child on their own it is presented in such a way that the children, each with their own roles, interact with one another under the guidance of the practitioner who co-ordinates this system of activity. Rather than locating cognition with the individual alone, it emphasises that cognition is distributed or shared. Thus as individuals work together on a joint activity, rather than approach it at a singular level, the players will engage in a range of interactions to facilitate the sharing of ideas to achieve the identified goal.

A common example of distributed cognition is the 'cockpit scenario'. Nardi (1996) highlights Hutchins' application of distributed cognition to the flying of a plane, focusing on the function of the cockpit. Hutchins states, according to Nardi (1996), that '*the cockpit with its pilots and instruments*

is forming a single cognitive system'(1996, p77). By this it is suggested that the technological tools and symbols within the plane co-ordinate the activity of the pilots to collaborate their ideas and expertise. The result of these interactions is that the goal of flying the plane safely is achieved. The process of flying a plane cannot be considered as an individual cognitive process, for the thought processes are shared and distributed through a range of tools as the pilots manoeuvre the plane. However, the equipment and technology is not simply used to fly the plane, although this is an essential feature. The domains of knowledge that each individual has are coordinated so that the individuals use and apply their skills and knowledge in a joint activity. Indeed, Nardi (1996) argues that it is important to understand how individual agents *'align and share within a distributed process'*(1996, p78).

But how do these definitions and descriptions relate to the area of peer activity in a children's centre? For, can a scenario relating to the shared and co-ordinated activity within a cockpit have any relevance to understanding peer activity amongst young children? I would argue that distributed cognition constitutes part of a child's daily context. It reflects a reality of the early years curriculum in that it considers the context of

formal social situations whereby the children are co-ordinated into particular social activities. If we apply the 'cockpit' example, once again, to the telling of a story, we can observe how the book, pictures, words, use of puppets and actions modelled by the practitioner coordinate the activity. The children are encouraged to participate and share ideas. It is noticeable how they not only focus on the practitioner, props and book, but also on each other. The varying roles that children undertake demonstrate their knowledge of storytelling. Those who give their comments are demonstrating that the story makes links to their own experiences, whilst those who use puppets indicate that the story has characters which give it a structure. As each child with their given role interacts with one another and utilises their knowledge of storytelling, they too *'align and share within a distributed process'* (Nardi, 1996, p78). Thus the goal of reading a story is achieved.

However, I do not believe that distributed cognition can simply be applied to any activity where children are organised into a group. For example, there may be occasions where children assemble together and wait for the practitioner to join them. Some children can self regulate and will thus wait quietly, for others the adult will prompt individuals as a means to

communicate what is expected. However, there is no clear system organising the group. They are a group of individuals waiting for the practitioner.

It is important that one focuses on specific features which allow one to examine the unit of analysis – the '*functioning of the system*' itself (Nardi, 1996 p77) where we move from 'I', the individual, to 'we', the group. To demonstrate this argument more fully, it is necessary to first consider the main facets of distributed cognition which can be applied to young children in a children's centre. I propose that the key elements of distributed cognition relevant to exploring peer activity are as follows:

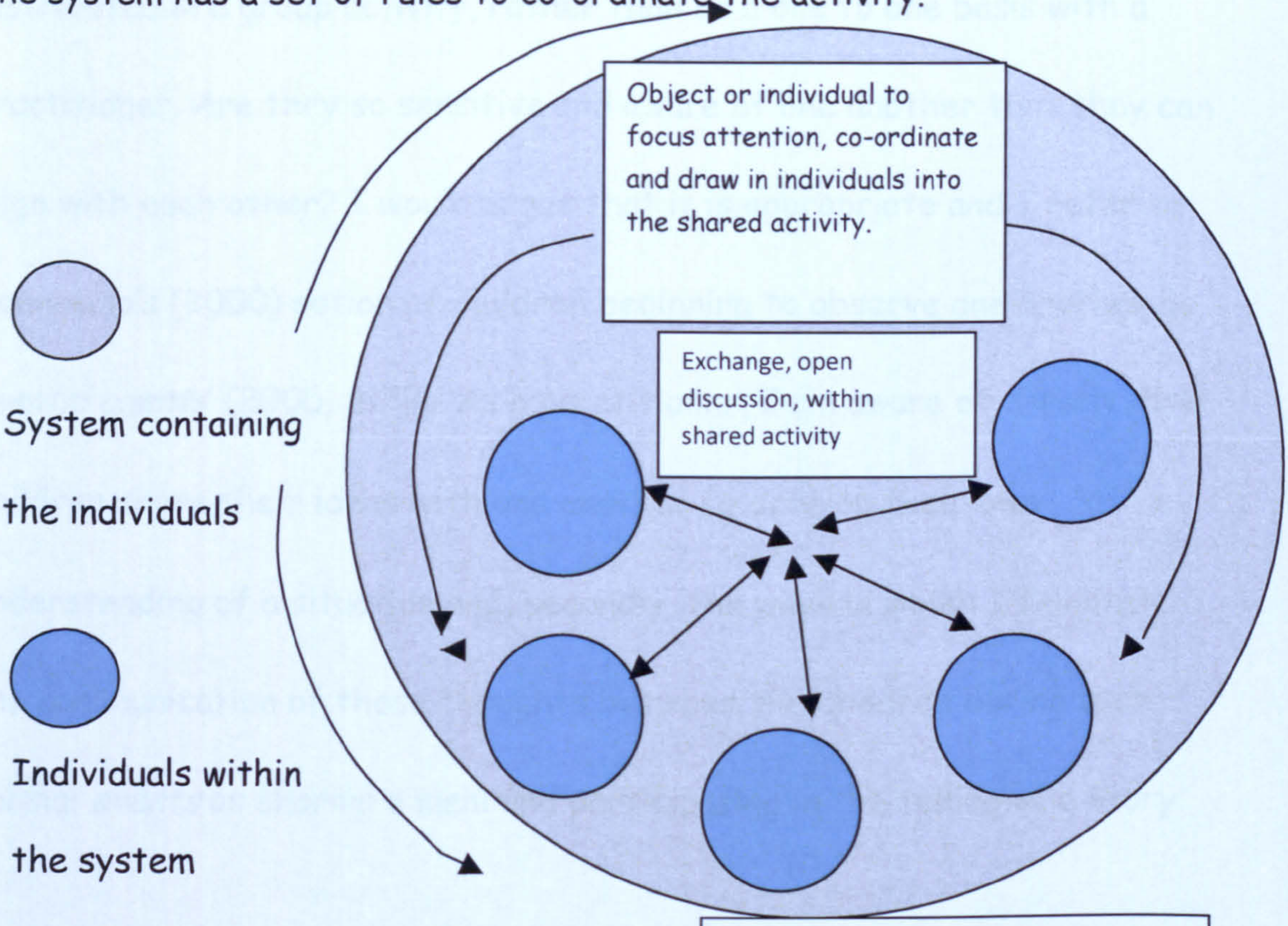
(i) Where individuals are engaged in a joint activity, where the specific task impacts upon the peer activity as they relate to one another, as they communicate ideas when, for example, sharing a meal, moving as a group and story/rhyme activities. Cognition is shared in an open forum, rather than within the individual as a separate entity.

(ii) A clear focus, be it an object or the practitioner sensitively using gestures and sounds, for example the clapping of hands and/or

the tone of their voice, is applied to facilitate the co-ordination of individuals to complete a shared goal.

(iii) There is evidence of the interplay between the individuals within the system and the activity itself. The system has a set of rules to coordinate the sharing and interaction of knowledge in order to achieve the desired goal. For example, the practitioner communicates to the children what is expected, such as sitting down in one place to listen to a story rather than walking around the room. Children are then encouraged to share their knowledge and ideas through comments and actions. As a practitioner, one becomes aware of how the child links one activity with an experience they have encountered elsewhere, such as at home. This can be represented visually in following diagram.(Fig 5)

Fig 5: Distributed Cognition



Thus, the framework of distributed cognition provides the opportunities to explore peer activity in those situations or realities when children are brought together as a group to share ideas. Props or symbols may be introduced to guide the children's thinking. The children's interactions are coordinated by the adult or the objects they use to structure an activity. The practitioner, through the notion of the interpersonal, can begin to assess the intrapersonal dimensions. Of course, one may argue that nursery

aged children are too young to internalise knowledge when it is shared or distributed in a group activity, rather than on a one to one basis with a practitioner. Are they so sensitive and aware of one another that they can align with each other? I would argue that it is appropriate and I refer to Tomasello's (2000) notion of children beginning to observe one another as '*mental agents*' (2000, p179). As a practitioner, I am aware of, firstly, how children share their ideas with one another to develop their own understanding of a situation and, secondly, the ways in which I facilitate the communication of these thoughts between the children during such formal *events* as sharing a meal and participating in the telling of a story.

This may appear to be an unusual application of distributed cognition, but it certainly can be utilised to enable practitioners to explore more fully and appreciate the context of formal situations where they coordinate an activity. It is a common feature of nursery life, and demonstrates a fundamental instinct of human nature, to tackle some activities through coordinated groups.

However, to consider distributed cognition as a framework to totally understand context is naive as not all peer activity occurs within a system.

It would be inappropriate to focus on context from this narrow perspective. It does not consider how individuals create an activity themselves, nor how they utilise mediating artefacts other than from within a system and, finally, one cannot examine how ideas evolve. Context has many more '*threads*' or '*analytical entities*' (Cole, 1996, p135) which, require further exploration.

Activity Theory

Historically, activity theory originated from Vygotsky's socio-cultural approach to understanding cognitive development. As an early years practitioner, one observes *episodes of structured mediated activity*, be it a child using a pot of paint to represent ideas, a semiotic device such as a word or gesture to reinforce ideas, or even the child seeking the practitioner's knowledge to resolve a difficulty. Such examples of appropriation are observed in the nursery classroom every day.

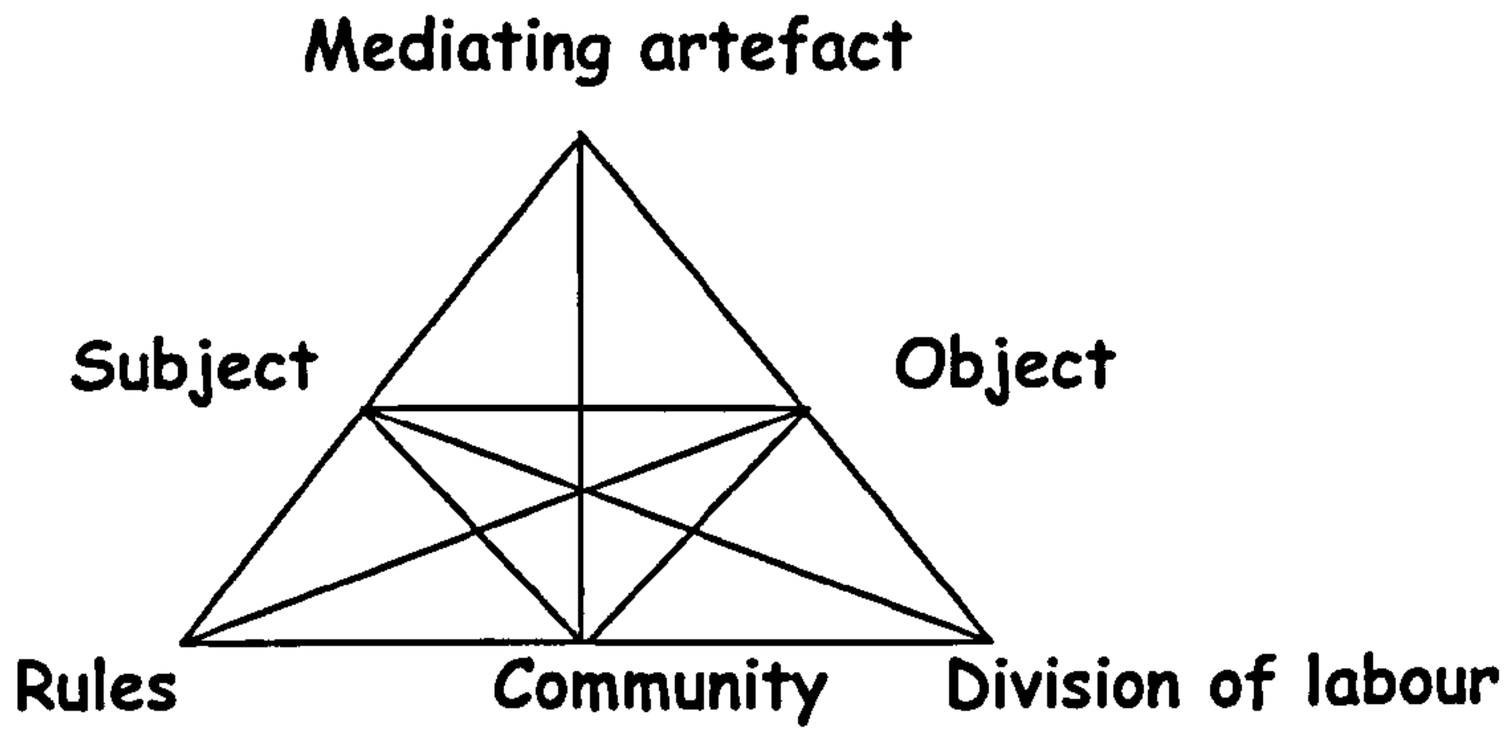
Although the phrase 'activity theory' uses the term '*theory*', I would argue, for the purposes of this study, it is best used as a model or

framework to examine activity, rather than as a theory to explain a set of ideas which can be proved or disproved. Engstrom's Activity Theory Triangle as cited in Cole (1996) allows one to

> *'examine mediated activity as it integrates the subject, the object and the instruments (material tools as well as signs and symbols) into a unified whole'* (Cole, 1996, p139).

Thus one can map onto the observed activity the key elements of activity theory and, in so doing, draw out the dynamics of peer activity. What is significant about activity theory is that Engstrom as cited in Cole (1996, p139) does not simply consider subject, object and mediation from the perspective of the individual but considers other features which shape an activity. He extends Vygotsky's mediation triangle to include the interaction of the elements of rules, community and division of labour, which are located at the bottom of the triangle (fig 6, p78). This allows one to analyse the activity from the perspective of the community or group involved in the activity itself. This makes it a very suitable model for examining peer activity.

Fig 6: Activity Theory - Engstrom as cited in Cole (1996,p140)



As a practitioner, I have observed *episodes of structured mediated activity*. One such example is children engaging in a building activity.

3 children (subjects) attempt to build a tower in the construction area (object). At first they are unsure of what to use. There are boxes, bottles, different types of paper and wooden bricks. They select the bricks and randomly place one brick on top of another, with no consideration for size. They soon become frustrated as the tower falls. One child (A) takes the lead and seeks the support of the practitioner who mediates between the subjects (children) and the object (construction area) and demonstrates placing the larger bricks on the bottom, thus sharing her knowledge. In response to the ideas presented another child (B) gives instructions that child (A) should stand in the middle to stop the tower falling over. The third child (C) watches what is going on.

Thus, if we now map this activity onto Engstrom's Activity Theory Triangle as cited in Cole (1996, p140), we can consider how the framework can be used to examine the varying elements of the activity. This then draws our attention to how the mediatory devices of tools, semiotic elements and personal support, influence the ways in which the children engage with one another, divide up the task into particular roles and devise rules to assist the completion of the task. Thus through mediation the children can now successfully build a tower. This is illustrated on the following page (Fig 7).

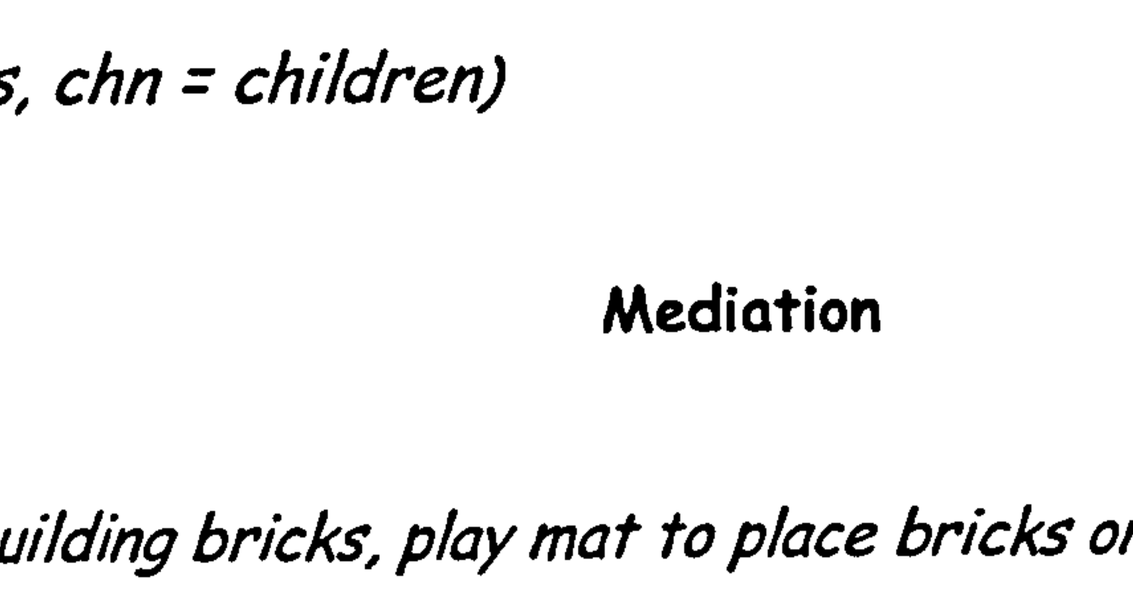
Fig 7: Construction activity mapped onto the Activity Theory Triangle.

(abbreviations, chn = children)

Mediation

Tools *- duplo building bricks, play mat to place bricks onto and supporting stands to link the bricks together.* ***Semiotic*** *- giving and listening to instructions.*

Personal *- seeking out a practitioner to help when the tower falls down.*



Outcome → Building a tower

Subject 3 chn

Object - construction area

Rules

Community

Division of labour

1 child stay in the middle onto the bricks (Child's rule)	chn and practitioners in the nursery	*child A*- leads to hold *child B* -gives instruction *child C* silent observer

Through activity theory, we have a model or framework which allows one to explore peer activity during *episodes of mediated activity,* for the unit of analysis is quite simply '*the activity itself*' (Nardi, 1996, p76). Engstrom (1999) argues that

'*human activity is multifaceted, mobile, and rich in variations and content and form. It is perfectly understandable and probably necessary that the theory of activity should reflect that richness and mobility*' (Engstrom, 1999 p20).

Such multifaceted activity is very evident within the nursery as children engage in an array of structured activities which have many different features. Indeed, many practitioners can often be amazed by the intricate interplay between ideas, resources used and the roles that children take on to complete a task. When attempting to join an activity, the practitioner can often be told the various rules of the activity. Yet if the practitioner leaves the activity and returns several minutes later, the children may have changed roles, or indeed, changed the rules as the activity has evolved. Identifying the various elements within an activity like this can be challenging for a practitioner. Thus, it is because of this richness, complexity and variety of human activity that I have chosen a contextual framework which I believe, will demonstrate, reveal and illustrate the many

elements of peer activity. By beginning to explore mediation beyond the individual we can begin to examine peer activity in a multidimensional form within the contextual framework of the activity itself.

Initially, the contextual framework of activity theory may present a challenge to practitioners, as many may not see themselves as a mediatory device. However, when this is applied in practical terms to an *episode* of mediated activity, one can clearly see how the practitioner's role not only impacts upon the outcome of the activity, but also the peer dynamics within it.

The strengths of this framework lie within its clear defined structure which is adaptable to analysing varying examples of human mediated activity. Activity theory complements distribution cognition as it gives us more awareness of the varied elements within an activity, rather than the notion of systems coordinating an activity.

However, the framework does present limitations in terms of enhancing ones understanding of peer activity. Although both Nardi (1996) and Cole

(1996) lean towards activity theory as the most effective contextual framework in terms of understanding human activity, I would suggest that what is lacking here is the development of activity. We have a framework which can explore the reality of structured mediated activity, but this, in my view, does not just happen. It develops over time. This transition phase is just as important as the activity itself. There is no opportunity to examine this in depth. Another reality has yet to be considered, namely the opportunity for children to freely engage with one another and, thus, one can observe activity evolving.

Situated Action

One may consider that distributed cognition and activity theory pick out all the aspects of the realities experienced by both practitioners and children, and yet there is one aspect which has not been identified. There are many occasions when children freely associate with one another without the direct involvement from the practitioner. I would argue that this context is sometimes difficult to interpret as the practitioner may feel they have less control. Situated action provides an opportunity to consider the reality of free associations and analyses spontaneous human activity as individuals interact with their environment. It involves almost the telling of

a 'social story' of how the individual responds to and changes the environment around them. Problem solving is thus at the heart of the activity. The real focus should be, as Nardi states (1996), on the '*everyday activity of persons acting in the setting'* (1996, p71). The unit of analysis here is spontaneous *'moment by moment interactions'* (1996, p71).

Unlike the previous studies where structured systems and mediation are used as frameworks for exploring peer dynamics, this theory of context aims to consider the evolving activity of the individual as it interacts with its environment. Indeed, as Nardi (1996) argues, situated action refers to everyday human activity as it '*grows directly out of the particularities of a given situation'* (1996 p71). Thus, the Children's Centre is an '*arena'* (Nardi 1996, p71) for what is emerging and one does not always know what is going to occur until it appears. This is very different from the ideas of distributed cognition and activity theory where the practitioner and child have a shared goal and have a greater indication and awareness of what is going to happen. But how useful is this approach when attempting to understand peer activity? To answer this question, it is necessary to critically consider the main themes of situated action and what they offer in terms of examining another aspect of peer activity.

The fundamental principles behind situated action which are important to this study are threefold. Firstly, it focuses on the interplay between the individual and the situation they find themselves in. This is not fully explored in the previous two notions of context. It considers how that individual behaves as they tackle an activity. Human activity is situated within the environment and, thus, we have almost a story being played out before us as the individual interacts with their environment, as they carry out an activity. The individual must find answers from the environment as they complete their task. Perhaps the most appropriate way to illustrate this is to use Nardi's (1996) example of human activity situated within a supermarket. She suggests that the supermarket is an *arena* within which emergent actions takes place. Each shopper has their own list of what they need. They thus look down each aisle to obtain the item required.

However, we can extend this example by considering how the individual would change their activity if the items had moved to different aisles, as they so often do, to accommodate a new range of products or if, indeed, a particular ingredient for a recipe was not available. The individual is thus required to explore a solution in order to locate the items or to consider a substitution for their recipe. How would they respond? Do they ask the

shop assistant, or look at the labels hanging above each aisle to identify where next to go? Perhaps they meet a friend in the supermarket and seek their advice. At the heart of this example, and at the centre of situated action, is spontaneous and improvised activity, which is vital if one is to be able to explore solutions. Thus, human activity gradually emerges as the individual responds to the environment they find themselves in. Indeed as Suchman (2007) argues,

> *'if we are interested in situated action itself, we need to look at how it is that actors use the resources that a particular occasion provides' (2007, p31).*

Secondly, plans are not clearly defined. Suchman (2007, 2nd edn) argues that

> *'stated in advance, plans are necessarily vague, insofar as they must accommodate the unforeseeable contingencies of particular situations' (2007, 2nd edn, p26).*

Thus, the outcome is not generally identified but evolves as the activity within a given situation develops. Nardi (1996) suggests that

'in situated action, goals and plans cannot even be realised until after the activity has taken place (1996, p82).

As a practitioner, one observes the emergence of plans and ideas as the activity evolves when children explore their surroundings. One such example is when one observes the children entering the nursery area and finding a box of new resources placed in the room. No clear direction has been given by the practitioner. Some children walk tentatively towards it, while others avoid it; some lift out the resources and explore them. The children have no idea how these might be used, but as a group become engrossed. Those children that avoided the box may begin to take an interest. Ideas evolve as to what they will do with the resources. Practitioners may be tempted to intervene to direct the activity and it is often difficult to judge what they should indeed do. Their involvement may change the development of what is occurring.

Finally, the idea of '*community of practice'* (Daniels, 2008, p94) is of particular importance when examining peer activity. Human activity, when it is situated within its very context, is more than simply considering how that individual responds to its environment, although this is important if we are to understand such activity. Lave and Wenger (1991) emphasises the

significance of *'newcomers'* becoming *'part of a community of practice.'* (1991, p29). Human activity is not isolated, but is part of a community which enables an individual to obtain the required knowledge and values required to be a member of that community.

To understand this further, Lave and Wenger (1991) present their notion of '*Legitimate Peripheral Participation'* (LPP). The process of seeking membership into a community is *legitimate* because all members of the group accept and receive new potential members of the group or community. These new members are on the periphery or edge of the group and thus they task in the functioning of the activity is initial *peripheral* to the overall outcome of the task. Finally, it is through *participation* in the activity that the new members gain knowledge to develop the activity further. Therefore, full membership of a community does not happen immediately, for it is a gradual process. The participants start out as *'newcomers'* (Lave and Wenger, 1991, p29) on the periphery of the community and gradually, through observation of, and interaction with, the established community members, called *'old timers'*, (Lave and Wenger, 1991, p29) they acquire the understandings and values that structure that community.

Such a theory can be argued to be somewhat vague. Its unit of analysis is centred upon social relations, which are dynamic and ever changing. It lacks the tight structure of such contextual models as distributed cognition and activity theory, where one can clearly identify the development of pre-planned objectives. Wenger (1998) himself challenged the appropriateness and validity of such a framework and in later work introduced a much more structured model from which to examine communities of practice. He thus presents the notion of duality which he describes as *'a single conceptual unit that is formed by two inseparable and mutually constitutive elements whose inherent tensions and complementarity give the concept richness and dynamism'* (Wenger, 1998, p66). According to Wenger, there are four dualities – '*Participation-Reification*', which suggests that meaning is constructed through active and involvement in the activity; '*Designed-Emergent*', which identifies the tension between pre-planned and emergent activities; '*Identification-Negotiability*', whereby individuals begin to identify their key roles in the activity itself and finally, '*Local-Global* duality, which analyses how communities interact with one another.

Although the notion of *duality* is a well defined structured model from which to analyse the communities of practice, its suitability when compared

with the original theme of *'Legitimate, Peripheral, Participation'* (Lave and Wenger, 1991) for examining emerging and ever changing peer activity is less secure. The analysis of the given situation becomes too segmented and disjointed, and its simplicity is lost. For it is the fluidity of LPP, that is so suitable for exploring and explicating peer activity of young children through moment by moment interaction through the notion of situated learning. This fluidity is very evident in the nursery classroom, as children attempt to become involved in an activity. It can even be extended to the practitioners themselves, who can feel on the outside and through observation and sensitive interaction attempt to become members of the activity in order to understand it more fully and thus gain a greater awareness of how their role should develop in order to facilitate the children's learning.

As we might expect, the three theories at the centre of situated action are not separate from one another, but are interlinked as the unit of analysis emphasises the relationship between the individual and their environment. We observe the individual attempting to interact with their immediate surroundings and attempt to resolve the problems and challenges this creates. For example, for the individual to become a full member of

the community, they must continually problem solve as the activity changes and, once a fully grown member of the community, the individual must tackle new challenges through spontaneous problem solving activity. If we take the supermarket scenario once again, an individual may observe others as they explore where to pay, or how they should pay if self service machines are in operation. However, if these processes alter, or as in the example before, the sequence of resources on the aisles changes they may once again feel on the periphery of the activity and thus need to realign themselves before enjoying full participation once again.

It is these three elements of situated action that I feel are very relevant to understand the context in which young children find themselves in on a daily basis. They present a notion of context that explores the development of an activity and the transition of its players, from a peripheral participant, to a fully fledged member of the activity itself. It is by examining the spontaneous nature of the individual, as they explore their environment and thus attempt to seek membership of their immediate community, that we can gain another dimension in terms of understanding peer activity.

However, such a framework does present a challenge to the research-practitioner. As it is focusing on the emergence of activity, there is no clear point of departure in terms of human intentionality structuring the activity as the objectives are realised after the activity has occurred. It relies very much on the researcher's subjective view of that situation. It provides an in depth analysis of the unique situation at that moment in time, but lacks the structure from which one can generalise and compare. To use this framework in isolation would, I believe, provide a limited subjective view of peer activity, but in conjunction with the other contrasting structured frameworks of distributed cognition and activity theory, it allows the context to come alive as it unfolds before our eyes. One can observe the children discovering their own boundaries as they engage freely with one another and interact with their surroundings.

2.5 Conclusions

Such a study on peer phenomena can be argued to be somewhat unusual, in that it places such an emphasis upon exploring peer activity through an understanding of context. For the purposes of this research project, it is important that peer activity is explored from within the four realities, namely the *organisational structure* of the Children's Centre, *formal shared*

events, episodes of structured learning activities and interludes of free associations, which mould and create the nursery educational experiences children encounter on a daily basis. If we apply, once again Cole's Latin term '*contexere*'- to '*weave together*' (1996, p135), I believe that the four theoretical frameworks do indeed operationalise and weave together these four realities to provide a clear understanding of context and will thus provide an enhanced account of peer activity within a children's centre.

My exploration of peer activity rests upon a theoretical framework which recognises that peer interaction is a fundamental part of early years development and can be examined more fully if the contexts in which such activity takes place can be identified.

CHAPTER 3: Methodology

3.1 Introduction

Pellegrini and Bjorklund (1998) argue that

> *'the ultimate choice for a method of study should be guided by one's question and the most effective method to answer that question should dictate choice' (1998, 3rd edn, p55).*

Rather than follow a quantitative approach to data collection and rely on a series of standardised tests, I was 'guided' to observe the children in their natural surroundings in terms of their early years education. Dunn (2005) argues that,

> *'naturalistic observations enable us to study children in situations that have real significance to them'* (2005, p88).

In terms of this research project on peer activity, I am interpreting *'situations that have real significance'* (Dunn, 2005, p88) to the children through the four realities identified in Chapter 1 - *organisational structure,* formal shared coordinated *events*, *episodes* of structured mediated activity and *interludes* of free association. The chosen methodology must therefore allow the opportunity to document and observe these situations.

Thus the most appropriate route from my perspective has been to adopt a qualitative methodology. This allows one to examine the natural setting, explore the meanings behind behaviour and consider how the participants interpret their surroundings. For me, what is particularly significant about qualitative research in relation to this particular study is perhaps best described by Strauss and Corbin (1990, 2nd edn), who argue that *'it is a way of thinking about and studying social reality'* (1990, p4).

3.2 Methodology

Having identified qualitative research as the most appropriate method for examining peer activity through four different notions of context, I was then faced with an array of different approaches under the heading of qualitative methodology. Those of particular interest were action research and ethnography. Both approaches naturally featured strengths and weaknesses in terms of reaching the final study outcome, being an enhanced understanding of peer activity. It was a matter of considering how the strengths far outweighed the limitations of an approach and if indeed the problems caused by identified weaknesses could be reduced.

What was particularly appealing about action research was the notion of practitioner research and the involvement of the practitioners themselves. The ultimate aim of this study is to provide practitioners with an enhanced understanding of peer activity. Action research has, at its heart, the process of evaluation as a means to enable a greater knowledge and self-awareness of the situation being studied. I had considered if this approach, by working with the practitioners as my starting point, could indeed be an avenue for further developing one's understanding of peer phenomena. Guided by specific questions, I wondered if peer activity could be illuminated by the practitioners themselves. However, for the purposes of this study the weakness of action research is that it focuses upon the actions of the practitioners themselves in order to present opportunities for them to reflect upon their practice, and therefore would not have provided the scope for in depth observations of the children. Thus the children would not have figured at the heart of the study, as the focus would have rested with the practitioner. The realities, a key feature to my understanding of peer phenomena, would not have come to the fore.

Conversely ethnography's strengths lie in its fundamental approach to data collection for *'peoples actions and accounts are studied in everyday*

contexts rather than conditions created by the researcher' (Hammersley and Atkinson, 2007, 3rd edn, p3). Banister's et al (1994) assessment of ethnography as being '*concerned with experience as it is lived, felt or undergone',* (1994, p34) emphasises it strengths as a methodology for observing and analysing emerging peer activity within differing contexts.

However studying children in their natural educational environments through ethnography has its weaknesses. There is a danger that one's findings can become too subjective and therefore cannot be generalised, thus a study on peer activity in a children's centre fails to be relevant to other early years practitioners in other children's centres or educational settings. Equally ethnography can be time consuming due to the sheer amount of data produced resulting in a failure to identify the finer details, which is crucial if one is too produce a credible study that can be utilised to challenge existing educational practices.

Despite these concerns I felt selecting ethnography utilised my position in the Centre as a research-practitioner to its full potential, as it most suited my professional experiences as an advisor who engages in both discrete and participant observation to guide other practitioners. I considered the

weaknesses of ethnography could be more effectively overcome than those identified in action research through an appreciation of reflexivity and through a carefully planned strategy for monitoring validity and reliability (for further information, see p111), thus reducing the possibility of the study being too subjective

Having established ethnography as the research methodology, before planning its final design, I considered the features of ethnography when applied to an educational setting, conducted by research- practitioner. I was aware that I would naturally participate in the lives of the children and staff who attend that particular setting. In order to achieve this objective, data could be collated from a number of sources in order to allow for triangulation;

- Documentation relating to the educational setting.
- Observation of children and staff in the setting rather than under experimental conditions.
- Interviews and conversations with children and staff, '*which can be structured, semi structured, informal and retrospective*' (Pellegrini, Symons and Hoch, 2004, 2nd edn, p72).

- Data collation is initially unstructured in order to allow particular themes to emerge, thus enabling the researcher to draw inferences and explore meanings behind the activity under investigation.

The adopted approach thus reflects an insider's perspective of the setting, where the researcher is able to become involved with the participants and their culture while maintaining a *'professional distance necessary to gather and weigh evidence objectives'* (Banister et al, 1994, p13). Thus, in terms of education, this may direct the researcher to assume the role of teacher/assistant in the setting, or it may mean the researcher becomes fully involved in the activities of the day, by following and engaging with the children. This methodology contrasts sharply with an outsider's perspective of the setting, applying a quantitative ideology to data collection where they aim to separate themselves from the educational setting, so as to remain objective. Rather than seek the meaning of particular behaviours or actions from the perspective of the participants, the quantitative researcher may wish to measure and quantify activity.

When selecting ethnography, I was aware of its contrasting features in terms of *etic* and *emic* approaches to data collection. By exploring setting

documentation, one can discover the factors which enable the functioning of a particular educational setting, such as curriculum priorities, timetables of activity, routines and staffing structures. However, once these features have been identified at an *etic* level, one may then seek an *emic* approach to glean how such structures are interpreted by both children and staff. I considered both methods to be of value.

3.3 Practitioner Ethnography

Once an appropriate methodology had been selected, it was important, as a practitioner, to ascertain which elements within ethnography could be applied. To facilitate the organisation of practitioner ethnography, I have been guided by Pellegrini, Symons and Hoch, (2004, 2nd edn) discussion of Fetterman's (1998) as cited in Pellegrini et al (2004) '*aspects of ethnographic data collection*' (2004, p68). Thus the following categories have formulated the design of the methodology.

- Fieldwork
- Site entry
- Insider perspective

- Balance of etic and emic approaches to the collation and organisation of data

- Selection and sampling

- Documentation

- Observation of children

- Interviewing both children and staff

Having taken these considerations into account, the proposed study is predominantly *emic* in its approach with some *etic* features. In light of Pellegrini, Symons and Hoch, (2004, 2nd edn) approach to *'Observing Children in their Natural Worlds'*, it can also be noted that, although ethnography best describes my approach to data collection, it also relies heavily on observational study. To examine children within the identified realities of *formal social events, episodes of mediated activity and interludes of free association,* an observational study was deemed the most appropriate method for capturing these moments as they occur.

3.4 Nature of Data and Fieldwork Strategies

Since the study utilises both *etic* and *emic* approaches, the methodology is organised into two clearly defined stages.

Part 1a explores the reality of the Children's Centre's organisational structure through the application of Bronfenbrenner's Bioecological Model of Human Development. This involves the analysis of documentation such as the Children's Centre Development Plans, Policy Documents, OfSTED report, from an *etic* perspective.

Part 1b examines the interpretation of policy and organisational structures from the perspective of the children and staff. This involves the analysis of detailed statements, sourced from questionnaires and observations of children, utilising an *emic* approach to data collection. From this data, the microsystems within the Children's Centre were located and timetabling of Centre activities were identified, which formed the basis for the development of Part 2.

Part 2 follows an *emic* approach and predominantly utilises observational study of the children in each of the three remaining realities of *formal*

shared events, episodes of structured mediated activity and interludes of free association, through the contextual frameworks of *distributed cognition, activity theory and situated action.*

This section involved:

- Participant and discrete observation
- Interviewing both children and practitioners, while:

(i) involved in an *episode* of structured mediated activity

This was very much described as *'interviewing on the move'* (Clark, 2004, p145). For further information refer to p106 in this chapter.

(ii) watching a replay of an *event and an interlude of free association* using recorded material.

By defining the methodology in two different stages, I considered it would allow peer phenomena to emerge through the four realities in a way that is accessible and meaningful to practitioners in early educational settings.

In order to analyse the four realities in depth, each one is discussed in four separate studies which can be located in Chapter 4.

3.5 Dilemmas and Challenges

While reflecting on my role as a *research-practitioner* I was very aware of the strengths and weaknesses of my approach. I was faced with several dilemmas as I attempted to tackle the challenges of practitioner ethnography, in particular the issues surrounding reflexivity.

Practitioner Ethnography

The notion of research-practitioner following an insider approach to data collection has been a real strength. To have that increased knowledge of the Children's Centre allows one to fully appreciate the features which structure the ethos and organisation of the Centre. One is already familiar with the *'situations which have real meaning'* (Dunn, 2005, p88) to the children. Thus, one can embrace the four realities more readily as contexts for peer activity. However, I would argue that to fully embrace an inside researcher approach, and all its advantages, one should also explore the notion of '*reflexivity*' (Banister et al, 1994, p13) and some of the challenges that this brings to an ethnographic study.

It is at this point I wish to establish my particular standpoint as a practitioner ethnographer. Firstly, I am a parent of a child, aged 5, who has

undoubtedly inspired this study as I have observed her relationships with her peers become more complex. Secondly, I am a consultant practitioner who endorses the importance of the role of the adult in the learning environment, but also has a great interest in the importance of peer dynamics as part of that learning environment. Finally, I am a research-practitioner conducting an ethnographic study in a familiar location. This familiarity is particularly evident in terms of relationships with children, staff and parents. These elements, my role as a parent, consultant-practitioner and now as a research-practitioner formulate a unique standpoint as each of these factors impact upon my interaction with the research data. It would be naive to assume that one could ignore such qualities. They allow a particular perspective to evolve. Despite this, however, I was very aware of not only some of the challenges and dilemmas my personal standpoint created in methodological terms, but also by the very fact, that I was researching such young children. Thus, I was required to consider such issues as, how to effectively research young children in their natural setting, observer bias, observer effect, relationships with staff, validity, reliability and time management. These are discussed on the following pages.

Researching young children

Observing and interviewing children from an ethnographic standpoint is particularly challenging. There are many pitfalls when researching such young children. Firstly, observing children can naturally be influenced by the adult's perspective of events. Secondly, the techniques used to observe the children can be obtrusive and this impairs one's ability to capture peer activity as it naturally occurs as they encounter the varying realities of nursery life. Finally, interviewing and interpreting children's comments can be difficult as children have varying levels of competency in communication and language skills. To ensure ethnography can provide a credible outcome in terms of understanding peer activity, one is required to be sensitive and creative when conducting observation of and interviews with the children.

Clark's (2004) exploratory study on listening to young children to understand their early educational experiences from their perspective, to some extent, provided a model from which to develop a sensitive and creative strategy for observing and interviewing young children. Indeed her utilisation of what she refers to as the '*mosaic approach*'(2004, p142) to construct an appropriate methodological framework for researching

young children, presented some interesting options in terms of observing children from an ethnographic approach.

The principle underpinning the '*mosaic 'approach'* or '*multi method model'* is that it aims to recognise that '*children have important perspectives to contribute about their lives'* (Clark, 2004, p142). It is because of this clear defined aim or principle that the methods used to collate data when researching young children are focused on, and successful in, obtaining the child's voice or perspective.

Thus Clark's (2004) employment of not only observation, but also child conferencing, children using cameras to take photographs of their favourite things, tours and maps of the early educational setting to enable children to share their thoughts, likes and dislikes about their setting was particularly interesting. In terms of exploring peer activity, I considered her various approaches to understanding the child's perspective extremely valuable as a means to develop a credible study. However, I did not consider that it would be appropriate to adopt all the varying methods she identified, as I felt it would be too time consuming and also some methods would not necessarily draw out the essential data for understanding peer

activity. Nevertheless, what was particularly useful for developing an interview technique was her notion of '*child conferencing on the move.*' This recognised that sitting children down to formally engage with them, may not be the most effective way to interview. They are quite simply '*on the move'.* Thus the researcher too, needs to be '*on the move'* to talk with the children on issues which are relevant to them at that particular time as they engage in an activity. It is this particular strategy for researching children, which inspired not only observing children both as a discrete and participant observer, but to also engage with them '*on the move',* as they encounter varying daily realities within a children's centre. However, interviewing children *'on the move'* also generated the idea for interviewing practitioners '*on the move',* for they too found formal interviews difficult.

Observer Bias - Being aware of any prejudices that may affect data collection and analysis.

Neil Mercer (1991, p70) emphasises the importance of '*washing your mind clean'* before conducting observation. Pellegrini, Symons and Hoch, (2004 2nd edn) also raise the issue of *'observer bias'* (2004, p86-87), which refers to the observer being aware of their own '*expectations and knowledge'* (2004, p86-87) of the participants, which may impair observation and recording techniques. When I applied this to my

circumstances, I realised from initial observations that, as a practitioner, I could become distracted by what the other practitioners were doing and ignore key moments in the observation. I would often apply my consultant role in terms of analysing the adult's role and suggesting alternative strategies. This was addressed by preparing clear points to consider while conducting the fieldwork, thus enabling the observation to be very focused on the job in hand.

Working as both practitioner and researcher and the impact of this upon colleagues in the working environment.

It was important that the relationships between staff and myself were monitored, as my working as a research-practitioner may have produced tension which was best avoided if the study was to be an enjoyable and informative, learning experience for all involved. In order to deal with this issue the practitioners were encouraged to have the opportunity to express their concerns. Having explored a number of techniques to develop my interview style and opportunities for respondent participation, I felt the *'interviewing on the move'* (Clark, 2004, p145) was the most meaningful approach. In a more formal environment, I felt that the practitioners' responses were somewhat limited and the tension between my roles as a researcher and practitioner were creating a barrier, preventing greater

involvement from all concerned. Thus, changing my approach to a more natural process that staff were already comfortable with, was more successful.

Observer Effect

I was very concerned that the children would become either inhibited or exhibitionist in their behaviour if they were aware of my presence in what might have appeared to be a very different role to the one they were familiar with. In order to address this issue, I reviewed the layout of the room and located key points, where I could observe the children without being seen. This was then trialed in terms of tracking their movements to consider if I would need to move in the room and how I could do this without disrupting the observation.

Time Management

Managing and balancing my roles as researcher and practitioner placed pressure in terms of allocating times for data collection. I was very aware that utilising a '*specimen description*' (Slee, 1987, pp37-40) approach would be time consuming in terms of writing up and analysis. Therefore time constraints had to be taken into account when ensuring the project was manageable. In order to address this issue, I ensured that, after each

observation, I formalised the notes and did an initial analysis as suggested by Slee (1987), in terms of commenting and highlighting key information, as identified in Appendix 6. This did not allow the observations to mount up to an unmanageable level.

The Systematic Approach for Monitoring the Validity and Reliability of Data

I was very concerned that practitioner ethnography could indeed be challenged regarding the issues of validity and reliability, particularly from a positivist perspective. Although strong proponents of ethnography, Hammersley and Atkinson (2007, 3rd edn) have highlighted that ethnographic research may be viewed as '*lacking scientific rigour' (2007, 3rd edn, p7).* Nevertheless, I consider practitioner ethnography provides the most appropriate method for exploring the topic of peer activity within the child's natural surroundings, as it is able to take into account, in a very real way, the significance of context. Thus, I was to some extent reassured by Hammersley and Atkinson's (2007, 3rd edn) comment that

'by including our own role in the settings under study as researchers, we can produce accounts of the social world and justify them without placing reliance on futile appeals to empiricism' (2007, 3rd edn, p18).

However Hammersley and Atkinson's (2007) suggestion that ethnographic research should pay no regard to empiricism, is somewhat naive, for at the very least validity and reliability are important for ensuring research credibility and accountability. One should be aware of any barriers which may limit the researcher's ability to give a valid and reliable account. This is not in my view, a contradiction to the principles of conducting ethnographic research, but ensures a solid platform from which a true account of a setting can emerge. As a research-practitioner I was aware of the tension between my drive to research peer activity within a children's centre and my expectations and knowledge of the Centre as a practitioner. To ignore the requirement to address empiricism in terms of validity and reliability could in my view devalue the final study outcome.

To assist the exploration of empiricism further, I refer to the application of the terms validity and reliability as used by Pellegrini, Symons and Hoch, (2004, 2nd edn): Validity 'means truthfulness' (2004, p161), while 'reliability refers to the consistency of measurement' (2004, p140). Put simply, is what is being discussed a true representation of the Children's Centre and of the children themselves?

I acknowledge that as a researcher I did not wish for my role as a practitioner to interrupt the ongoing activities of the Centre and am thus required to *'wash my mind clean'* (Mercer, 1991, p70) of preconceptions. Conversely, as a practitioner I had experience of the process involved in conducting observation, albeit for the means of monitoring children's progress and to support practitioner professional development. I wished to use these skills and strengths as an observer to collate appropriate data.

To remove the barrier of preconceptions, utilise my experience as a practitioner observer, consider the requirement for validity and reliability and thereby develop a valid and reliable account of the Children's Centre, I employed the following techniques:

- I engaged with practitioners at regular intervals to discuss my initial understanding of context through the notion of *realities*, my findings from each of the four studies and finally my intentions for using such data to explore the possibility of developing a training programme for practitioners, focusing on reflexive co-construction as it emerges from peer activity.

- I employed the use of a practitioner questionnaire in the early stages of the study to glean practitioners perspectives of the structure, functioning and purpose of the Centre. (For further information see p121). I was concerned that I would make too many assumptions from personal experiences and familiarity of the Children's Centre, without fully engaging with centre documentation.

- I introduced the use of an *'observation diary'* to ensure that the children were observed consistently across the nursery session, over a period of nine months. I was very keen neither to simply observe an activity once, nor to focus on the same time slot for the collection of observational data. Equally, as a practitioner myself, I was very aware that the opportunities for peer activity, through the consideration of context, could not be limited to one location or microsystem.

Using these three approaches to practitioner ethnography gave consideration to the issue of validity and reliability, but also allowed for the opportunity to both observe children and provide an accurate account of children in their natural setting.

3.6 Arrangements for Fieldwork

Field Location - The Children's Centre

The Children's Centre is located in an area of considerable deprivation. It provides nursery education for children aged 3-4 years for 2.5 - 3 hourly sessions a day, either in the morning or afternoon. Children are entitled to attend the term after they are 3 years old. On completing the nursery experience, children transfer to reception classes in a range of local schools. There are very few children within the nursery from ethnic backgrounds or who have English as an additional language. However about 20% of the children have been identified as requiring additional support with regard to learning difficulties and/or disabilities. This is mainly in the area of speech, language and communication. The Centre has been recognised by the local authority for its work in relation to healthy schools, basic skills and most recently inclusion. It has also established a range of activities for parents of children attending the Centre and works closely with other multi professional agencies. In addition to the nursery, the Centre also provides day-care for 50 weeks of the year, to support families and their children. However, this study will refer only to the nursery, thus focusing on the Children's Centre as a context for peer activity for children aged 3-4 in their nursery year.

Participants

The study group for both Parts 1 and 2 consisted of:

a) 22 children who attended the morning nursery 8.55 - 11.25 am. Time restrictions limited the study to include the morning nursery group only. It was important to ensure children were with their friends as this was raised by Azmitia (1997) as an important feature for observing peer interaction (Chapter 1, p15-16).

b) The practitioners within the Children's Centre - Head of Centre, 1 Senior early years practitioner, 1 qualified teacher, 4 teaching assistants (NVQ level 3) .

The participants (children and practitioners) were identified with the following demographic information-:

Children

- Sex: 12 boys 10 girls
- Age: 3-4 years +
- Ethnicity: White British, Asian
- Identified special educational needs: 5 in the area of speech and language development.

Practitioners

- Sex: Female
- Age: 26+
- Ethnicity: White British

In terms of participant mortality only 1 child left the study group half way through the research project due to a change of family circumstances.

'Site Entry into the Field' (Pellegrini, Symons and Hoch, 2004, 2nd edn, p69) **Parts 1 and 2**

One of the advantages to this study was, undoubtedly, accessibility to the setting. As the Children's Centre is my place of work, the practicalities of ensuring entry in to the field were already firmly in place. However, considerable work was still needed to get the project underway. There were general discussions and explorations to establish whether the Centre was, indeed, a feasible location for conducting my research. This included considering:

- where the study would be conducted, in terms of which parts of the building could be used.

- the opportunity for participant and discrete observations to take place. Does the layout of the Children's Centre allow or inhibit these processes, in terms of data collection?

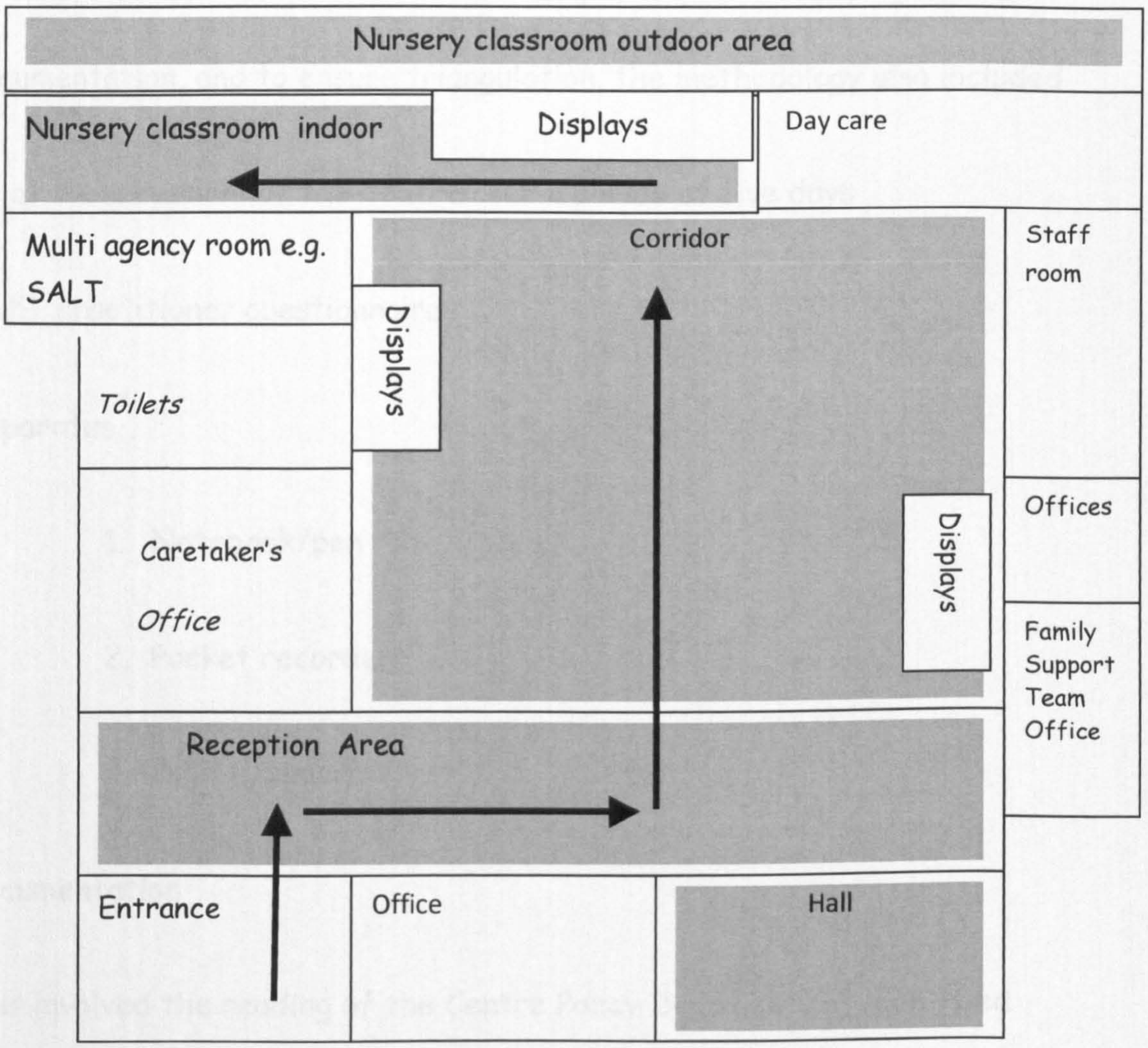
- if recording the children was an option and, if so, when and where would this occur.

With these issues in mind, an initial investigation of the setting was required. Equally, an initial review of the building was conducted to consider the location of the field work in relation to the possible identification of the range of *'microsystems'* (Bronfennbrenner, 1977, p514) in which children find themselves in. Once these were identified, the feasibility of conducting observations using a digital camera and camcorder was assessed. A Plan of the Children's Centre (Fig 8) is on the following page.

Fig 8: A Plan of the Children's Centre

Locations for fieldwork in identified microsystems

Route to the nursery



3.7 Part 1 - Study 1 Ecological Study of the Children's Centre

28.50 (26% of research time) hours were given to collating data for Study 1. This included the analysis of documentation i.e. Centre Policy documents including Curriculum, Admissions, Inclusion, Health and Safety, Centre

Development Plans, timetables and curriculum planning (monthly, weekly and daily).

In order to corroborate the information gleaned from studying Centre documentation, and to ensure triangulation, the methodology also included

a) Observation of the Centre over a period of five days

b) Practitioner questionnaires

Apparatus

1. Notebook/pen
2. Pocket recorder
3. Digital camera

Documentation

This involved the reading of the Centre Policy Documents as identified above. Key headings were first considered as points of interest, in terms of understanding the organisation of the Centre. These are as follows:

- Role of the Children's Centre including developing multi-agency links.
- Function of each area of the building.
- Links to the wider context in terms of government policy

- Nursery Curriculum – routines and timetabling of activities

- Development plans, past and present.

Once identified, this information was further analysed in terms of relevance for identifying each system from an ecological standpoint - *'micro, meso. exo and macro systems'* (Bronfenbrenner 1977, p514-515).

Each microsystem was photographed using a digital camera to support analysis of documentation within Study 1. These can be located in Appendix 3.

Individual questionnaires to practitioners.

In order to address my concerns regarding my familiarity with the setting and how this may impact upon the issues of validity and reliability, practitioners were asked to voluntarily complete a questionnaire. This explored the structure, functioning and purpose of the Centre from their individual perspectives. Data gleaned from these questionnaires was utilised as an aid to developing a balanced view of the Centre as a context for peer activity. Example questions focused on the practitioner's role in the Centre and the range of activities children engage in (See Appendix 4).

Observation

Over a period of five days, I observed key aspects of the Centre to obtain an overall view of it from an ecological standpoint. Initially, this was conducted as a shadow observer tracking the children's movement to identify the places within the Centre, they visited on a regular basis for a period of 2 days i.e. following the group as they moved from area to area. This was recorded using field notes and whispering into an audio recorder. For the final 3 days, I joined the children in each of the areas identified as potential microsystems for Study 1 as a participant observer. This work was recorded using as before, field notes and a pocket audio recorder.

Field notes and Writing up Notes

The *'specimen description'* (Slee, 1987, p37) approach to note taking was selected as the appropriate format for recording observations. I was aware that such an approach has its weaknesses. It can be time consuming as notes must be written up, commented upon and coded before full analysis can commence. Equally as a great deal of information is often collated within a short time, one can be concerned in terms of the reliability and quality of notes taken. This can create difficulties when identifying relevant material. However, I considered the need to use an approach that

allowed one to freely observe the children in their natural environment was essential, if one was to fully explicate peer activity in all its diversity. Once the observation had been completed, the notes were condensed to aid reading and initial comments were added at the side (Appendix 6). If necessary the notes were coded in preparation for further examination and analysis.

Selection and Sampling

A timetable/ observation diary (1) for data collection covering a period of two months was prepared .

Table 1: Timetable/Observation Diary 1:- Sample (Full details can be located in Appendix 5)

Study 1					
Date	**Location (micro-system)**	**Methodology**	**Times**	**Duration**	**Total number of hours**
01.12.08 02.12.08	N/A	Collation of Documentation	9.30 -11.30 9.30 - 12.30	2hrs 3 hrs	5.00 hrs
12.01.09	Reception area, hall, corridor	Observation tracking children (Discrete observer)	8.30 -11.30	3 hrs	3 hrs

Presentation and Analysis of Data

The total time given to analysis, presentation of data and the writing of Study 1 totalled a period of 135 hours. The data from Part 1a/b, is presented and analysed in Chapter 4 - Study 1 which explores the *reality of the Children's Centre's organisational structure.* This provides an ecological perspective of the Children's Centre as a context for studying peer activity.

Centre documents, child observations and comments from questionnaires were organised into categories in terms of their relevance for revealing the varying systems of ecology - '*micro, meso, exo and macro'* as defined by Bronfenbrenner (1977, pp514-515). Initially, this was conducted by simply using four different coloured highlighter pens to code the evidence in terms of the varying systems identified - *micro* was highlighted in red, *meso* -green, *exo* - yellow and *macro* - blue. Once completed, an account and interpretation of each system was presented, so as to reveal *the organisational reality of the Children's Centre.*

Study 1 forms the background for subsequent Studies 2-4, exploring peer dynamics through a range of contextual frameworks.

3.8 Part 2 - Peer Activity through Distributed Cognition, Activity Theory and Situated Action

A total of 81.35 hours (74% of research time) was given to collating data for Studies 2, 3 and 4. In each of the studies the three remaining social realities are explored through different contextual frameworks. Study 2 identifies social *shared and coordinated events* through the notion of distributed cognition; Study 3 considers *episodes of structured learning* activities within the realm of activity theory; while *interludes of free associations* is examined under the framework of situated action in Study 4.

Although the focus of each study is different, there are commonalities in terms of methodology. To ensure triangulation, each one utilised observations of children and '*interviews on the move*' (see pp107- 108 and p128) with both staff and children to generate raw data, which has been refined, to give an account of peer activity within each separate reality.

The implementation of these techniques allowed for a more balanced view of the situation being observed. However, these were applied in different

ways, in order to meet the challenges each context presented in terms of observing peer activity. It was particularly important to consider finding an opportunity for the children and practitioners to express their ideas and thoughts in a naturally unobtrusive way. These three aspects of methodology are discussed under the heading 'Data Collection'.

Apparatus

The following apparatus was employed to support the collation of data for each study.

- Notebook
- Pocket recorder
- Digital camera
- Digital camcorder

Data Collection

The fundamental techniques used for data collection in Studies 2-4 are described below.

Observation

'Hanging Out' (Pellgrini et al, 2004, p110)

The first stage of this process simply involved my being present at different times of the session, in the different microsystems already identified in Part 1 as possible observation points, either as a participant or discrete observer. This undoubtedly provided all those involved with the time to become accustomed to such activity. Observations were recorded through field notes and digital recording equipment. These initial observations also presented a range of options in terms of sampling and selection. The 'hanging out' session acted as a period of preparation, and formed the foundations, before conducting data collection for Studies 2-4.

Discrete and participant observations

The second stage of this process followed a clear plan of when and where to conduct discrete and participant observation. The time allocated over a week was in accordance with other work commitments and took into account the amount of time required to observe peer activity through the varying contextual frameworks. It was important to ensure that a full picture of activities was mapped out. As in part 1, observations consisted of using field notes, applying the *'specimen description' approach* to recording data (Slee, 1987, pp37-40) with the additional use of a digital camera and camcorder.

Interviewing children '*on the move*'

In addition to being observed, the children were interviewed using an '*on the move*' technique developed by Clark (2004, p145). What was appealing about this process for this particular study was the informality of such an approach. I was very keen to explore the situation from the child's perspective in the most natural way for them. Interviewing *'on the move'* is not too dissimilar to the general discussion the children engage in with the practitioners.

Interviewing practitioners '*on the move*'

This approach was also applied to the practitioners. Once again, this type of discussion was not unusual in that, as a team, they are often engaged in professional dialogue with other colleagues in the room to assess the next steps of an activity, or to consider which children required further support. Equally, such a process ensures the session runs smoothly in terms of following the daily routines. The children themselves were also comfortable with this technique as they would often observe practitioners discussing the day with each other.

Observations and interviewing children and practitioners *'on the move'* were applied in each of the Studies (2-4), with some adaptation in order to meet the requirements of the situations being explored in particular the use of video prompted recall. These are discussed below.

Distributed Cognition

Observations were conducted as a discrete observer throughout, so as not to intrude on the activity itself. Equally, '*interviewing on the move'* for both children and practitioners was conducted after the event, as it was felt that to have interviewed the children and practitioner during the formal coordinated activity would have interrupted the flow. Thus, the event was recorded using both digital camera and camcorder. Those clips showing the most activity in terms of distributed activity were played for the children to watch and to comment on, on the same day they were recorded, using the informal interviewing approach.

The utilisation of video prompt recall was inspired by DeWitt's (2008) exploration of how primary aged children engage with and understand the purpose of exhibits within a science centre. She used video clips of the

children interacting with various displays and then replayed these during interviews to stimulate recall. I considered that such an approach could be used in informal interviews with young children and could provide the opportunity to revisit the *event,* but with the children adding their own unique understanding of what they were doing and why. The children identified within the observation were encouraged to watch, but if other children wished to join the group then they were welcomed. Field notes and audio recordings of the session were also taken. Practitioners were also invited to feed back any comments during the playback session.

Activity Theory

As this context allowed greater freedom for the adult to be involved in an activity, observation occurred in two parts. The first was as a discrete observer, so as to allow the *episodes* of structured mediated activity to develop, while the second part involved participant observation and the '*interviewing the children on the move'* technique. After the discrete observation period, I joined the children in their activity, listened to their conversations and recorded them on a pocket audio recorder. Initially, I did not give myself any role other than to follow their lead. Sometimes I was drawn into their play, while on other occasions, they allowed me to listen

and ask questions in terms of a simple commentary e.g. 'That looks fun-Can I help? Tell me what to do. What are you doing? What do you think will happen?' Interviewing the children using this approach complemented the observations. Practitioners were also invited to comment on the activity.

Situated Action

As this context involves *interludes* of free association and the spontaneous flow of action, it was important, as for distributed cognition, that my involvement did not interrupt the action. Thus, the observations were conducted as a discrete observer. The '*interviewing on the move*' techniques for both children and practitioners were conducted in the same format as for distributed cognition, (see p129).

Selection and Sampling

Information from Part 1/Study 1 formed the structure for when and where the observations and interviews were to be conducted. This was developed in two formats. List A provided an overview of the Centre's general routines and activities conducted over a week, while List B structured the timings of when children entered into the identified microsystems.

List A: General routines and activities observed over a week are given below. (Full details can be sourced in Appendix 5.)

- Children arrive in the reception area with parents.
- Go to the hall for songs/rhymes with their parents and staff.
- Children, parents and staff move along the corridor to the nursery classroom.
- Hang up coats on to individual pegs and self register.
- Parents leave.
- Children choose from a range of activities for a short period of time.

List B: Access to Microsystems

- **Reception area** 8.40
- **Corridor** 9.10, 9.35 11.25, 11.55 12.00 onwards for a period of 10 minutes (approx)
- **Nursery room** (indoor/outdoor) 9.15 - 11.25 with some periods spent in the hall (Wed/Fri)
- Hall 8.55 - 9.10, 11.30 -11.55

Using information from Lists A and B, Timetable C was developed, which highlighted the range of activities categorised into the three contextual frameworks – distributed cognition, activity theory and situated action. This determined the times, dates and overall timetable for data collection. A sample of this is given below. (Timetable can be located in Appendix 5.)

List C: Timetable - Linking activity to contextual framework (Full details can be sourced in Appendix 5.)

Time	Activity	Reality of shared activity within a co-ordinated system containing the participants.	Reality - structured activity.	Reality of free association as spontaneously children engage with one another.
8.40	Children arrive in the reception area with parents.			*
8.55	Go to the hall for songs/rhymes with their parents and staff.	*		
9.05	Children, parents and staff move along the corridor to the nursery classroom.	*		
9.10	Hang up coats on to individual pegs and self register.	*		

Observation Diary - for Data Collection

Each study had its own observation diary for data collection. Samples of each of these timetables are as follows. (Timetable can be sourced in Appendix 5.)

Table 2: Distributed Cognition - Observation Diary 2

Data collection totalled a period of 24.50 hours. Sample of dates, times and activity are shown below. (More details can be sourced in Appendix 5.)

Study 2 Peer Activity through Distributed Cognition					
Date	**Location (microsystem)**	**Methodology**	**Times**	**duration**	**Total number of hours**
09.02.09	N/room	Preparation	9.15-11.25	2.15 hrs	3.45 hrs
10.02.09	Corridors	Hanging out period	9.10,9.35 11.10, 11.55	20 mins 45mins	
11.02.10	Hall	As above Timetable for data collection given to staff	11.30-11.55	25 mins	

Table 3: Activity Theory - Observation Diary 3

Data collection took a total of 27.15 hours. Sample of dates and times for data collection are shown on the following page. (More details can be sourced in Appendix 5.)

Study 3 Peer Activity through Activity Theory					
Date	**Location (microsystem)**	**Methodology**	**Times**	**Duration**	**Total number of hours**
30.03.09	Nursery room	Preparation	9.25 -10.00	35 mins	1.35 hr
1.04.09	N/room	Hanging out period	10.30-11.00	30 mins	
02.04.09	N/room	As above	10.30-11.00	30 mins	
20.04.09	N/room	Discrete observation (first 10 mins of each observation)	9.25-10.00 10.30-11.00	35 mins 30 mins	1.05 hr

Table 4: Situated Action – Observation Diary 4

Data collection totalled a period of 29.30 hours. Sample dates and times for data collection are given below. (More details in Appendix 5.)

Study 4 Peer Activity through Situated Action					
Date	**Location (microsystem)**	**Methodology**	**Times**	**duration**	**Total number of hours**
01.06.09	Reception Nursery room	Preparation Hanging out period	8.40-8.55 9.15 -10.30	15 mins 1.15 hr	4.10hrs
02.06.09	As above	Observation →	8.40 -8.55 10.00 -11.25	15 mins 1.25 hrs	
03.06.09	As above	→	→	15 mins	

Presentation and Analysis of Data

The total time given to analysis, presentation of data and writing of the 3 studies totalled a period of 405 hours. The data collated from Part 2 is presented and analysed in three separate studies focusing on the contextual frameworks of distributed cognition, activity theory and situated action. These are located in Chapter 4.

Study 2 - Peer Activity in the reality of shared *events* as explored through Distributed Cognition.

Observations of formal, coordinated and shared *events* have been documented in rough notes, which have been refined into four separate accounts and can be located in the study itself. Discussion with children and staff, while watching a recording of each *event* was noted and relevant material is included in the study.

Data has been analysed through the application of Nardi's (1996) unit of analysis the '*functioning of the system*' (1996, p77). In so doing the interpretation of data considers the identification of the system; artefacts used to represent, communicate and transform knowledge in

order to maintain the functioning of the system; and peer activity, observed as children interact with one another through the system. These include the coordination, collaboration, alignment and the sharing of ideas as the children engage in a shared coordinated event. Each account is followed by an interpretation from the perspective of both distributed cognition and peer activity.

Study 3 - Peer Activity in the reality of *episodes* of structured activity, as explored through Activity Theory

Observations of *episodes* of structured mediated activity have initially been recorded using rough fieldwork notes at the scene of the activity. These have been refined into five separate accounts and are located in the study. Discussions with children and staff using the '*interview on the move*' technique were recorded on a pocket tape recorder and noted verbatim after the activity. Elements of these discussions appear in the accounts and in the interpretation sections of the study.

Data is analysed using Engstrom's as cited in Cole (1996, p140) Activity Theory Triangle, which examines activity from the notion of

mediation. The following features, using Engstom's model, are identified in each episode of structured mediated activity - *mediation, subject, object, rules, community, division of labour and outcome.* Each account is followed by an interpretation from the perspective of activity theory and peer activity.

Study 4 - Peer Activity in the reality of *interludes* of free association, as explored through Situated Action

Observations of *interludes* of children engaging freely with one another were recorded in rough notes and have been refined into three separate accounts. Discussion with children and staff, whilst watching a recording of *interludes* of free association, was noted and relevant material is included in the interpretation and sections of the study.

Data has been analysed using firstly, the application of Nardi's (1996) unit of analysis in reference to situated action - *'activity of persons-acting in setting'* (1996, p71) where one observes spontaneous problem-solving in a moment by moment flow of activity which is not directly structured by the adult and, secondly, Lave and Wenger's (1991) notion of 'Legitimate

Peripheral Participation'. Here, one is focused on children's desire to become a member of a group and, thus, one observes their differing positions in terms of periphery to the focal group. Each account is followed by an interpretation from the perspective of situated action and peer activity.

Having completed the analysis of data, I presented my findings informally to a number of colleagues. This allowed the opportunity to reflect on the relevance of the study and if any additional observations were required. I was reassured, at this point, by their interest, in particular utilising an understanding of peer dynamics as a means to facilitate opportunities for emerging *reflexive co-constructions*.

3.9) Ethical Considerations

As I am working as a research-practitioner in my place of work, the issue over accessibility to the setting was to some extent resolved. However, I ensured the research was conducted in accordance with regulations relating to working with children, as set out in the Revised Ethical Guidelines for Educational Research (British Educational Research Association 2004).Therefore my CRB (Criminal Records Bureau) was checked to ascertain if it needed to be renewed in line with current Centre policy.

Equally, I ensured I was not on my own with a child, but was in view of other practitioners in accordance with the Children's Centre's procedures. The project was discussed with all relevant parties. Confidentiality was emphasised as a key element to conducting this research project and, thus, participants are not mentioned by name.

Although the observation of both practitioners and children is part of the general procedures for monitoring both the children's progress and staff development and parents at the start of the academic year are informed of this process, I was aware of the conflict in ethics between current Centre procedures and my utilisation of observational material for the development of this study. Indeed the purpose of Centre observations versus study outcome was very different. It was very evident that the aim of the study was not to engage with observational material as a means to directly monitor and assess children's development, but was to explore peer activity in all its diversity. The findings from which could be employed to support staff professional development. To allay such conflict it was clearly explained to both parents and practitioners how the observational material in its varied formats would be utilised and discussed within the study. However, any photographic or recorded material remains in the Centre.

CHAPTER 4: Research Findings

Study 1: Peer Activity and Context from an Ecological Perspective

4.1.1 Introduction:

Chapter 1 introduced the notion of context through four realities, from which peer activity can be examined. It is now my intention to explore the *organisational reality* of the Children's Centre through Bronfenbrenner's (1977, 1994, 2nd edn, 2005) Bioe*cological Model of Human Development*, in order to describe and illuminate in broad general terms, the early years context in which peer activity occurs. This exploration will form the foundations for the development of Studies 2-4.

Study 1 will document, in turn, the tiers of ecology as defined by Bronfenbrenner (1977), namely the '*micro, meso, exo and macro systems*' (1977, pp514-515) as they occur in the Children's Centre. Consequently we have a framework from which to examine those elements which directly and indirectly impact upon the 'shaping' of the Centre. This will allow a multi-dimensional image of the Children's Centre to emerge and, thereby, one can ascertain the early years educational context in which young children are placed as they encounter one another.

4.1.2 Rationale:

This study will initially examine four microsystems identified in the Children's Centre, being the reception, hall, corridor and nursery classroom. *(Photographs of each microsystem can be sourced in Appendix 3 and their location in the Children's Centre can be found in Chapter 3, p119).* I will apply Bronfenbrenner's (1994, 2nd edn) notion of the '*Process, Person, Context Model*' (1994,2nd edn, p38), as discussed in Chapter 2, to each of the microsystems, in order to describe the '*proximal processes*' (1994, 2nd edn, p38) as they occur. This application will be achieved by examining the four key elements of '*form, power, content and direction*' (1994, 2nd edn, p38) which structure the '*proximal processes*'. Each element will be interpreted against the following statements:

- *Form* describes the activity.
- ***Power*** explores the relationships and roles children undertake, either initiated by themselves or directed by others within the activity.
- ***Content*** examines how the area is structured and what it contains.
- ***Direction*** investigates the purpose of the microsystem.

From these initial explorations of the microsystems, the study will then go onto explore the meso, exo and macro systems as they feature within the Children's Centre. Consequently, we begin to move outwards from the centre of the model to explore other factors which shape the Children's Centre as a context for peer activity. There will be reference made to a fifth layer of the model, the '*chronosystem*' (Bronfenbrenner, 1994, 2nd edn, p40), in the summary, which acknowledges that environments change over time. However, this study will focus in depth on the first four nested systems, as these mainly structure the broad context from which peer dynamics emerge. Once documented, each system will be followed by an interpretation. Having established the context of the Children's Centre in general terms it will then be possible to examine peer dynamics from the notions of distributed cognition (Nardi 1996), activity theory Engstrom as cited in Cole (1996, p140) and situated action (Nardi 1996, Suchman, 2007, 2nd edn) in Studies 2,3 and 4 respectively.

4.1.3 Procedures Followed:

An ethnographic approach has been selected as the most suitable methodological tool for documenting the functions and routines of a children's centre as a context for peer activity.

In order to examine and document the varying features of the Children's Centre, the research has had access to the following:

- Children Centre documentation, including Policy Documents, Development and Curriculum Plans which include information regarding daily routines, OFSTED report.

- Discrete and Participant observations of children.

- Completed staff questionnaires.

4.1.4 Documentation of the Children's Centre (micro, meso, exo and macro systems).

Microsystems

The following four microsystems have been selected as they are inhabited by children on a regular basis during a typical day in the Children's Centre. These selections allow one to follow a child's movements from the moment they enter the building to their reaching the nursery classroom. Each microsystem reflects a different set of proximal processes which will be further explored through the remaining three studies.

i.Reception area (Appendix 3, Chapter 3, p119)

Form: The reception area is where each parent and child arrives, assembles with others on entry to the building, before a practitioner leads them to the nursery classroom. A feature of this element is the preparation for the exchange of the parent/adult figure for the practitioner.

Power: When the children wait with their parents in the reception area they are in an exclusive role of being son or daughter, brother or sister. As practitioners are not present, the structuring of this space, in terms of managing activities, rests with the parent.

Content: This area has been selected and defined by the Children's Centre as a space for waiting. Staff commented that the resources available reflect this purpose. There is a small selection of puzzles and books to appeal to, and entertain, the children while they wait. As it is only a small area with a few resources, it is not a place where any serious activity can be engaged in.

Direction: The main purpose of this system is to act as a holding area where children and parents can wait and, in so doing, it gradually introduces the child to the nursery session. The resources and displays prepare the child for what is coming next. The peer dynamics are very much shaped by the child being exclusively in the care of their parents.

ii.Hall (Appendix 3, Chapter 3, p119)

Form: The hall provides a large space where the Centre's communal activities occur, including lunch, specialist play and parent/child activity mornings.

Power: The children take on many roles. At lunch time, the adults become a carer rather than practitioner as they care for the children's personal needs. As the children sit not only with an adult at a table but also in small groups with their peers, they also take on the role of a diner and a friend sharing a meal. They learn the social protocols of eating together at the table. When engaging in large play activity with the practitioner, the child once again is the learner.

Content: The hall is an area of considerable size, its large windows looking out onto the pathway leading from the car park to the Centre. At one end, circular tables and chairs are placed in preparation for lunch, while the other end contains mats, play equipment and seats which can be used for play activities.

Direction: This microsystem provides the opportunities for the children to see themselves as part of a large community of peers and for them to consider how adults complement and support the children to create the nursery community. Peer dynamics are influenced by this feeling of belonging to a larger group of peers and adults which contrasts with the smaller family unit.

iii.Corridors (Appendix 3, Chapter 3, p119)

Form: This provides a route, allowing the children to move from one area to another. It can be overwhelming for children new to the Centre to learn how its different parts are connected. Practitioners are aware that

children's familiarity with the Centre develops slowly but, as the children frequent the corridors on a regular basis, their confidence grows.

Power: The corridor firstly provides a focus for the transition from the parent/child relationship to that of practitioner/child and, secondly, allows children the opportunity to explore being a member of a group of peers which use the corridor to access different parts of the building. As the children are moving with their peers, they take on the role of a friend.

Content: The corridor contains a series of gates to support adult supervision, thus ensuring that children cannot run out of the building. Practitioners provide a range of interactive displays encouraging appropriate behaviour, e.g. 'walking rather than running'.

Direction: This area has a physical purpose of directing people to different parts of the building. In terms of peer dynamics the children can begin to appreciate how to move as a group within the Centre in an ordered and safe manner.

<u>iv.Nursery Classroom</u> (Appendix 3, Chapter 3, p119)

Form: The nursery classroom is where the children spend most of their time in the Children's Centre and it is here that they encounter varied educational activities, which involve their peers in formal, structured and fairly open activities. Some children commented that the nursery classroom was somewhere they liked to be.

Power: The child takes on the role of learner. The practitioner is now the main carer as the parent is no longer present. The child engages in different activities within a range of groupings; individually, in pairs, in small groups and as a large group. Within these social structures, the child has had the opportunity to observe others, learn to be an individual, be part of a group, revisit previous experiences and be introduced to new concepts. Once again, the children are aware of one another. They are, at times, in competition with each other to claim a play area as their space for their activity. The child follows the practitioner's direction and has the opportunity to lead and initiate play on their own or with each other.

Content: The classroom has two key spaces - indoors and outdoors. Within the indoor space there are tables, chairs and carpet areas to offer varying seating options and peer/adult interactions. The resources and toys are

located in clearly defined areas to support construction activities, painting, role play and explorations.

The outdoor area is part grass and part pavestones. There are pathways for the children to ride vehicles. In the centre is a hut and a small waterfall. On either side of this centrepiece are 2 sandpits large enough for the children to walk and sit in. Towards the back of the area is a small climbing frame built from logs and there is an evolving 'Forest Garden' for the children to explore. The indoor and outdoor areas, resources and activities have been planned in line with the current pedagogical materials - the EYFS (2007).

Direction: The aim of this microsystem is to enable children to become learners. By encountering different activities and resources under varying levels of adult supervision, the children have the opportunity to consolidate existing ideas and experience new challenges. This process of learning is managed within social groupings where children can experience differing degrees of association with their peers in formal, structured and fairly open activities.

Interpretation

To assist analysis I will utilise Bronfenbrenner's (1994,2nd edn, p38) description of Propositions 1 and 2 as discussed in Chapter 2. When evaluating peer activity, as defined by Proposition 1, one can observe the children's interactions with one another becoming more complex as their familiarity with the Children's Centre grows. As they come to understand the routines, and become more aware of, their place within the Centre as a member of the nursery community, their awareness of, and interest in, one another increases. Thus, one can observe a range of peer dynamics emerging.

Proposition 2, through the introduction of the four elements of '*form, power, content and direction*', creates very different contexts for observing peer activity. In the reception area the arrangement of resources and the prominent role of the parent not only encourage parent/child interaction, but also allows the children to freely associate with one another. Conversely, the nursery classroom provides the children with a wider range of resources than available in the reception area and the practitioner rather than the parent is the main adult figure. Children thus have the opportunity to engage with both the practitioner and one another

through child or adult initiated structured activities. However, in the corridor and the hall the formal shared activities often led by the practitioner such as moving as a group or sharing a meal create very different contexts for peer activity.

By utilising Proposition 1 and 2 one can begin to note peer interaction through the realities of *formal events, episodes of structured activity and interludes of free association.*

Mesosystem

I propose that there are particular features structuring the organisation of the Children's Centre which, in turn, create a series of intricate interactions between the four microsystems already identified. These features include:

(i) **'Domestic order'** which defines the opportunities for ensuring natural links between home and the setting. Practitioners consider these to be an important feature of the daily routine.

(ii)' **Pedagogy'** which emphasises the legal requirements of the early years curriculum identified in the EYFS (2007) and includes the routines of the

day, which identify the timings for particular activities to take place. This element also considers the appropriate space for the range of pedagogical activities to take place.

(iii) **'Personal needs'** which caters for the individual requirements such as allowing for toileting needs and rest times. This element can be described as the personalisation of the 'domestic order' and is a particularly important feature of the Children's Centre in light of its inclusive role.

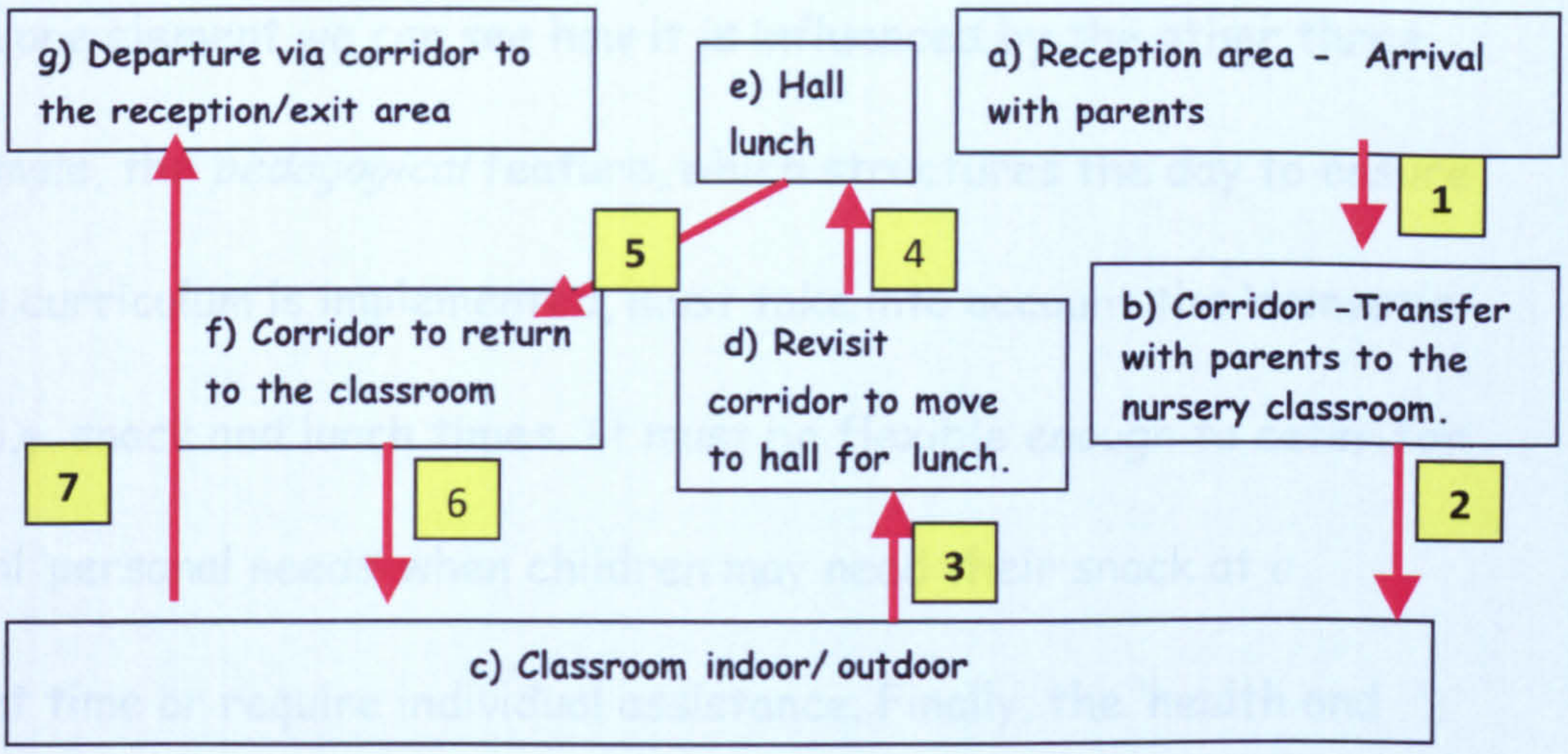
(iv) **'Health and Safety'** which identifies the legal requirements as stated in the statutory guidance of the EYFS (2007), such as focusing on '*safeguarding and promoting children's welfare, suitable people (caring for children), suitable premises, environment and equipment, organisation'* (2007 pp19-40*vi).

Interpretation

Firstly, the interplay between the microsystems and the mesosystem can be more fully explored through the following diagram. (Fig 9). This explores how the 'Domestic Order' links the microsystems together.

(vi) Statutory Framework for the Early Years Foundation Stage Welfare Requirements' (2007) pp19-40 *in the Early Years Foundation Stage (2007)*

Fig 9: **Domestic Order** – Sequences/routines for the day 1 - 7



Secondly, the *proximal processes* vary within one microsystem, as it links with another. For example, in the case of the corridor we can explore how it provides for varied peer activity. When the children were in the corridor with their parents it was observed that they accessed the range of interactive displays as they moved to the nursery classroom. There was very little peer interaction. However, when they moved along the corridor with the practitioner on their way to the hall they did not engage with these displays as they had done so earlier. The children were in a line one behind the other rather than alongside the parent. There was 'chatter' amongst the children as they guided each other to the next microsystem, i.e. the hall. If a child stopped and held up the line, the child behind would give them a gentle push *'Quick, they're going'*, and the line would continue to move.

Thirdly, the elements of the mesosystem do not work in isolation. If we examine one element we can see how it is influenced by the other three. For example, the *pedagogical* feature, which structures the day to ensure that the curriculum is implemented, must take into account the 'domestic order', i.e. snack and lunch times. It must be flexible enough to cater for individual 'personal needs' when children may need their snack at a different time or require individual assistance. Finally, the 'health and safety' requirements determine where activities can safely and securely take place.

Finally, as the children become more familiar with routines and movement around the Centre, they are able to focus more upon each other. They begin to watch one another, correct each other if rules have not been obeyed and share with each other likes and dislikes.

Exosystem

What is significant about this layer for the Children's Centre is that one is able to consider the link between 2 or more microsystems were at least 1 does not contain the child, yet still impacts upon the overall shaping of the

microsystems and thereby influences the development of that child. The following activities which do not contain the child are considered to have a significant impact upon the microsystems:

i) **Curriculum planning** sessions, and staff meetings provide the opportunity for the staff to consider pedagogical needs of the children as identified in the EYFS (2007)

(ii) **Local authority advisory meetings** and courses which offer both curriculum support and advice regarding special needs provision.

iii) **Multi-agency meetings** where teams of various professionals assemble on a regular basis to discuss the progress of children with special educational needs.

iv) **Management of capital expenditure** to ensure the upkeep and maintenance of the building.

v) **Management of Child Tax Credits** which provide parents wishing to return to work the monetary support to meet the costs of childcare provision.

Interpretation

Each of these activities enhances our understanding of the mesosystem.

i) Curriculum planning impacts upon the educational experiences that children encounter with their peers on a daily basis and thus shapes the 'pedagogical' element of the mesosystem.

ii) Guidance and training from local authority advisory teams support the inclusion of children with additional needs in a range of activities with varying levels of social interaction, thereby reinforcing the 'pedagogical' feature of the mesosystem.

iii) Multi-agency work influences the shaping of the dynamics of the 'personal needs' element of the mesosystem. For example, the Family Support Service offers parents caring for their children practical and emotional support and encourages the child's attendance at the Centre. Such activity impacts upon the child's readiness to engage with both practitioners and their peers.

iv) Management of capital expenditure ensures that the building, both indoors and out, is accessible to practitioners and children, therefore reflecting the 'health and safety' feature of the mesosystem. Practitioners

can more confidently allow children to experience a greater freedom in a safe environment as they engage with their peers in a range of activities.

v) Child Tax Credits encourages parents to seek both educational and day-care provision. Thus children not only have the opportunity to encounter early years education or 'pedagogy', but they can also spend time with one another in a social setting.

Thus, one can note that the ways in which children are organised and cared for impacts upon how they encounter and experience one another through the micro and meso systems.

Macrosystem

Bronfenbrenner identifies particular features of society which influence human development. These provide the '*blueprint*' (Bronfenbrenner, 1977, p515) for how organisations such as the Children's Centre will function. The following examples have been selected because of their relevance to peer dynamics within the context of the Centre.

Current Legislation and Policy

(i) **Access to education:** – Current government education policy determines who will access the Centre. For example children are entitled to free nursery education from the term after they are 3 years old.

(ii) **Government Policy** such as *Every Child Matters (2003)* not only emphasised the need for 'joined up thinking' amongst professional bodies, but also highlighted the importance of early years education. The *Children Act (2004)* provided the legal framework to transform children's services and the *Ten Year Strategy for Childcare (2004)* aimed to provide parents with the opportunity to balance work/family commitments and have access to high quality education through the development of children's centres. This was further enhanced through the *Childcare Act (2006),* which developed the *EYFS (2007).* This defines both '*Welfare*' and '*Learning and Development*' requirements for children from birth to 5 years old.

(iii) **Inspection** through such bodies as OfSTED, provides an element of quality assurance, thus influencing future development plans that ensure the Centre meets the required standards.

Interpretation

These key features of the macrosystem are crucial to ensuring that the Children's Centre follows the required procedures when providing early years education. Through the exosystem, the Centre, via its staff meetings and Centre Development Plans, is able to personalise its organisation to meet the needs of its local community. These personalised features are then reflected through the meso and microsystems. which are monitored through OfSTED inspections. Legislation and policy decisions at a national level facilitate parental access to educational settings. Such policies emphasises the importance of children's early years educational opportunities being met within a setting, such as the Children's Centre, where they encounter one another on a daily basis through a range of activities. These experiences undoubtedly provide the context from which peer dynamics emerge.

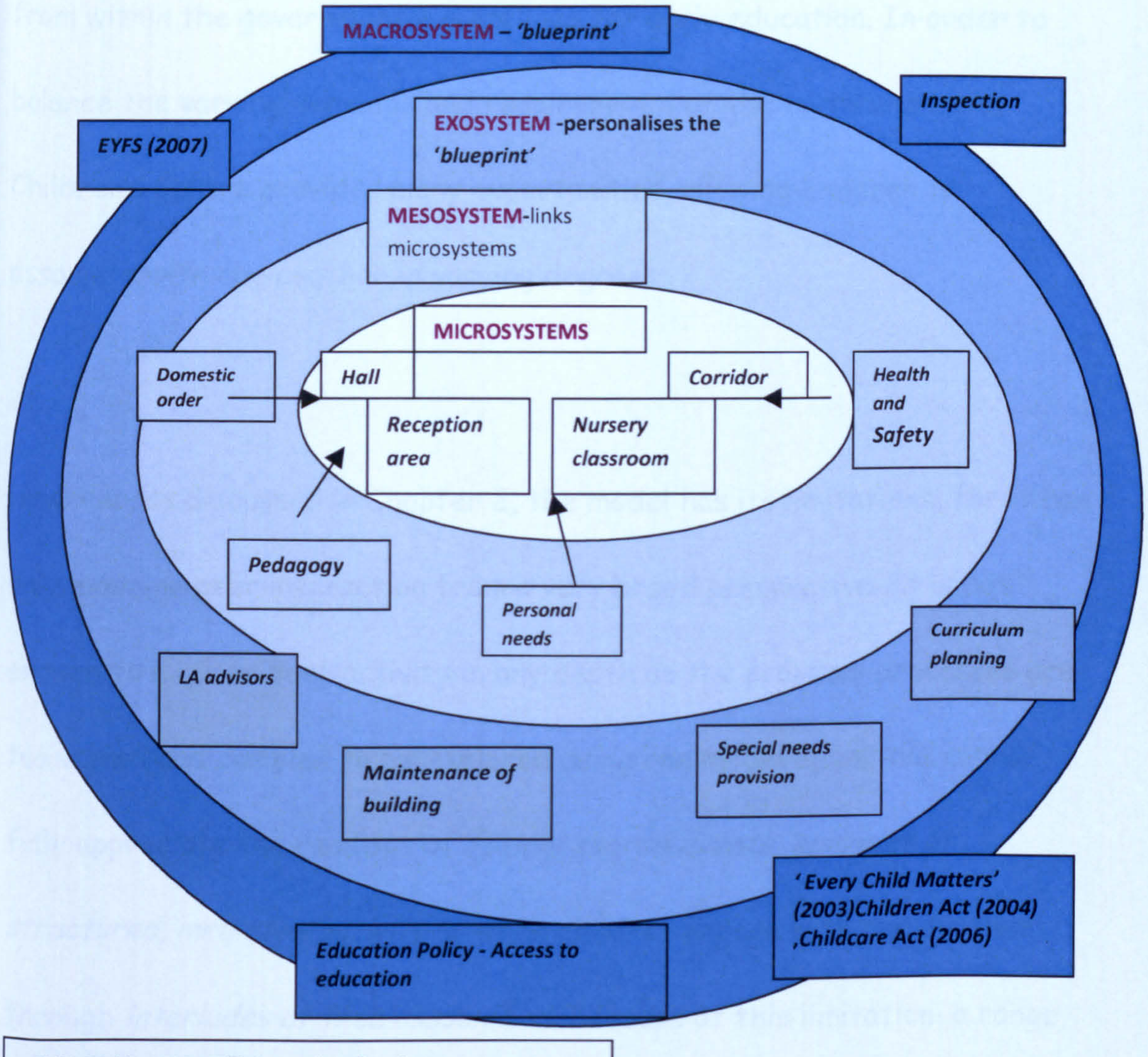
4.1.5 Summary

The Children's Centre

By utilising Bronfenbrenner's Bioecological model of human development, it has been possible to clarify the broad early years context within which

peer activities can be located, thereby considering the *reality of the Children's Centre's organisational structure*. This study has identified four microsystems from which to examine peer interaction. These microsystems are linked together through the mesosystem to allow the Centre to function and carry out its many roles, while the exosystem is crucial for interpreting and personalising the current pedagogical 'blue print' identified in government policy. These systems are summarised in the diagram on the following page (Fig 10).

Fig 10: The Children's Centre from an Ecological Perspective



CHRONO-SYSTEM is the final tier surrounding the other layers. It describes the development of early years education as it changes over time from generation to generation.

The educational provision within the Children's Centre is not only concerned with enabling children to learn, but also with meeting each child's personal and domestic needs, and creating links with the family. These concerns take

place not only within the physical constraints of the building itself, but also from within the governmental guidelines for early education. In order to balance the varying demands and requirements of the curriculum, the Children's Centre provides many opportunities, allowing children to associate with one another in varying degrees.

However, as discussed in Chapter 2, the model has its limitations, for it can only examine peer interaction from a very broad perspective. It is not enough to explore peer activity in any depth as the proximal processes are too varied and complex to be explored using one model alone. We cannot fully appreciate the realities of *formal shared events, episodes of structured, mediated activity* or when children engage with one another through *interludes of free association*. Because of this limitation, a range of contextual frameworks are required to further examine the varying patterns of peer activity as they occur in different contexts. Thus, peer dynamics through the notions of distributed cognition, activity theory and situated action will be examined in the following three studies.

Study 2: Peer Activity Explored through Distributed Cognition

4.2.1 Introduction:

Although the EYFS (2007) does not directly use the term 'distributed cognition' it does emphasise the importance of children interacting with one another in a variety of situations or organisations. Some of these scenarios can, in my view, be directly linked to the notion of distributed cognition. For example, the document suggests that although it is important for child-initiated activities to take place, it also refers to the importance of '*small group times'* and *'adult led activity.'* (EYFS, 2007, p7 *vii). In these situations the '*adult may introduce a particular material, skill or idea.'* (EYFS, 2007, p7 *vii). The document also refers to the importance of enabling children to communicate thoughts, ideas and feelings with adults and each other. As a practitioner, one begins to observe children encountering the representation, communication and construction of knowledge within a coordinated activity. It is important to explore this element of pedagogy under the focus of distributed cognition, for these coordinated activities will illustrate unique features of peer activity.

**(vii) Practice Guidance for the Early Years Foundation Stage in the Early Years Foundation Stage (2007)*

To achieve this aim I have selected four daily *events* located in the nursery classroom and the corridor microsystems which reflect the characteristics of distributed cognition. These are as follows:

1. *Songs, rhymes and number games in small groups with key person*
2. *Snack time in the classroom*
3. *Movement around the Centre*
4. *Self registration*

4.2.2 Rationale:

Nardi (1996) has defined the unit of analysis for distributed cognition as the '*functioning of the system*' (1996, p77). It is my intention to apply this unit of analysis to each of the four *events* identified above. This involves examining each *event* where;

- one views the class group as a *system* or a collection of individuals whose activities are being coordinated mainly by an adult and/or the children themselves. The children are thus engaged in a specific joint activity and are invited to share their ideas. The understanding and *internalisation* of knowledge is developed through the group.

- artefacts are used to coordinate the activity. These serve to *represent and communicate* knowledge in an accessible format for the group to understand.

- there is evidence of the interplay and interaction between the individuals as they *coordinate, collaborate, align and share* their ideas to complete an adult- led activity.

This study will explore and describe some patterns of peer dynamics observed in each of the four events. This will be achieved by firstly giving an account of what was typically observed amongst the peers and, secondly, an interpretation of these observations utilising the themes of distributed cognition as discussed above. Finally, an interpretation of the peer dynamics involved. The successful *'functioning of the system'* (Nardi, 1996, p77) is achieved very much through the role of the adult, but the children themselves also have an important part to play.

4.2.3 Procedures Followed:

The selection and sampling of activities has been taken from a range of daily activities from List C (located in Chapter 3, p133 and Appendix 5),

which closely relate to the features of distributed cognition as described in 4.2.2. Data collection consists of a combination of observation and interviewing techniques.

(i) Discrete observation of children

(ii) Interviews with children (Chapter 3, pp106-108 and p128) with reference to observation notes, photographs and recorded material.

Information was recorded using:

- Fieldwork notes
- Digital camcorder, digital camera and audio recording. The study will provide an account of each event. This will be interpreted firstly from within the area of distributed cognition and, secondly, from the perspective of peer activity.

4.2.4 Event 1: Literacy and numeracy skills through Rhyme.

Introduction

During the nursery session there are occasions when the children are brought together to explore as a group a particular concept in a

coordinated activity. This is often a literacy or numeracy activity and rhymes/ stories are a popular resource to achieve this goal. The functioning of the system is carefully managed through the actions of the practitioner.

Account 1

The children are collected together in a clearly defined area namely the carpet. They are sitting closely to one another in a semi-circle facing the practitioner. Some children are wriggling in their place and are gently prompted by the practitioner to settle. The practitioner initially attracts the children's attention using her voice. She raises it and then lowers it to a whisper. One is very aware of the hush as children focus their attention. The practitioner places puppets, story book and musical instruments on the carpet in the centre of the semi- circle. She then introduces the activity by drawing the children's attention to two birds on the grass in the outdoor area.

Practitioner: 'I can see the birds outside. Shall we sing 2 Little Dicky Birds?'

Children nod or say yes in response. Children sing or sign the rhyme with adult support.

The practitioner uses this rhyme as a prompt to develop the activity further.

Practitioner: 'Who can show me 2 fingers like this?'- (practitioner demonstrates 1 finger on each hand) 'Just like our song. 1 and 1 makes..'. Adult pauses and children call out '2.'

Child A:' I can do that.'

Child C: Watches child A and imitates the positioning of his hands. He shows his hands to the practitioner.

Practitioner: 'Good boy! ', and gives thumbs up.

Practitioner: 'Shall we sing our song again?'

Children: Nod or say yes.

Child B: 'I can do it fast.'

Child A: 'I can do it bigger too.'

Child C: Smiles and claps his hands while looking at child B.

The p*ractitioner smiles in response to this and comments:*

'That is clever. It is fast and loud. Let's sing it slowly and quietly now. What will that sound like? '

The children with the practitioner then sing the song.

Using both the puppets and the book the practitioner prepares the scene, while chatting informally to the children.

Children A and B show each other how they can make 2 using different fingers.

Child A: 'I can use my thumb and teeny finger – Look!'

Practitioner: 'Oh can you show us all? That is clever!'

The activity continues for a further eight minutes. The practitioner combines the use of story puppets and musical instruments to explore numbers 1-5.

Interpretation- Distributed Cognition

The system is *coordinated* by the practitioner and her use of props or artefacts. She sensitively focuses and maintains the children's attention through the use of praise, facial expressions, varying tones of her voice and the introduction of the story book and puppets. It is through the interplay of the actions of the practitioner and the children which structures and sustains the system. The children sitting together in a group take on the task of completing a nursery rhyme activity which

includes singing a rhyme. The children *align* themselves not only to the practitioner, through her use of her voice and props, but also to one another. They closely observe what is going on and *share* their ideas in order to achieve the goal of exploring language and number through rhyme.

The development of literacy and number skills is the key focus for this activity. The children explore rhyme and patterns of language and number as they appear in the wider world through their symbolic representation. *Knowledge and ideas are communicated* to one another with the aid of the puppets, story book and the rhyme itself. *Knowledge* of number is firstly explored through the rhyme. However as children become more familiar with this *representation* they then take this on a step further and begin to use their fingers to represent the number 2. This is evident within the activity as children A and B discuss the activity amongst themselves rather than in the wider context of the large group.

Interpretation- Peer Activity

Imitation is clearly visible in this activity and it is used by the children with varying degrees of success to *align* themselves to one another. It allows the

children to engage in a *shared and coordinated* task. The levels of social development and communication skills vary amongst the children. These can range from vocalisations, words, gestures and signing. Imitation is an important tool for starting this exchange and sharing of ideas.

It is also noted that as the children gain confidence or become familiar with the activity itself, the interaction for some children in terms of sharing ideas moves away from focusing solely on the practitioner to engaging with each other. Indeed the children begin to explore the number two themselves before being drawn back into the large group again. In this situation we can identify a child who leads and one who follows.

Competition was an important feature in this event. I would argue that this has the role of maintaining the structure of the system. As children are competing with one another they are also encouraging each other to complete their part of the task. Thus competition aids the coordination of the task.

4.2.5 Event 2: Sharing a Snack

Introduction

Snack time occurs in the middle of the morning, its purposes being to replenish and refresh the children, so as to sustain activity throughout the morning, to increase their knowledge of what constitutes a healthy diet and to inform them of the social importance of sharing a snack with others. The focus for this activity is once again the practitioner and a range of props namely cutlery, plates, cups etc. The practitioner once again uses the interplay of her voice and the artefacts in order to attract the children's attention. Account 2a discusses the process of sharing a meal as a large group while account 2b highlights the interaction between a small group of children sitting at a table.

Account 2a

The children are already sitting at tables in the classroom. They have been invited to sit in set places, each with a key person or practitioner. Although there has been a considerable amount of noise with the movement of chairs and children chatting to one another the room is now relatively quiet. One practitioner who is standing in the centre of the room has the attention of the children. She has a variety of props including cups, plates, jug of water

and prepared snacks of fruit. What follows is an excerpt of dialogue as she engages with the children.

Practitioner: 'What do we need first?'

Child 1: Points to the jug

Practitioner: 'Good girl!'

Practitioner: 'What do we put water in?'

Child 2: 'Cups. I like the red cup!'

Child 3: 'I like blue.'

Child 4: 'Me too', and smiles at child 3.

Child 3: 'We need plates.'

Child 5: 'One for everyone'

Child 1: Points to the plates.

The practitioner gives each table a specific task to complete, such as collecting the plates and giving them out to one another, pouring water into the jugs etc.

Once completed the children begin to eat their snack at their specific table.

Account 2b

What follows is an account of the interaction and interplay between the children on one specific table.

The children are now settled with their group and key practitioner, the main contribution from the nursery teacher having finished. At one table there is considerable activity as the children talk with one another and with their key person. Child 1 pours a drink into a cup. Child 2 watches her and then pours a drink into his cup using another jug on the table. The children's conversation focuses on the food on the table.

Child 3: 'I've got an apple.'

Child 4: 'I don't like apples.'

Child 3: 'Apples my favourite.'

Child 4: 'Bananas', and shows it to the other children.

Practitioner: 'Why do you like apples?'

Child 3: 'Because they are green'

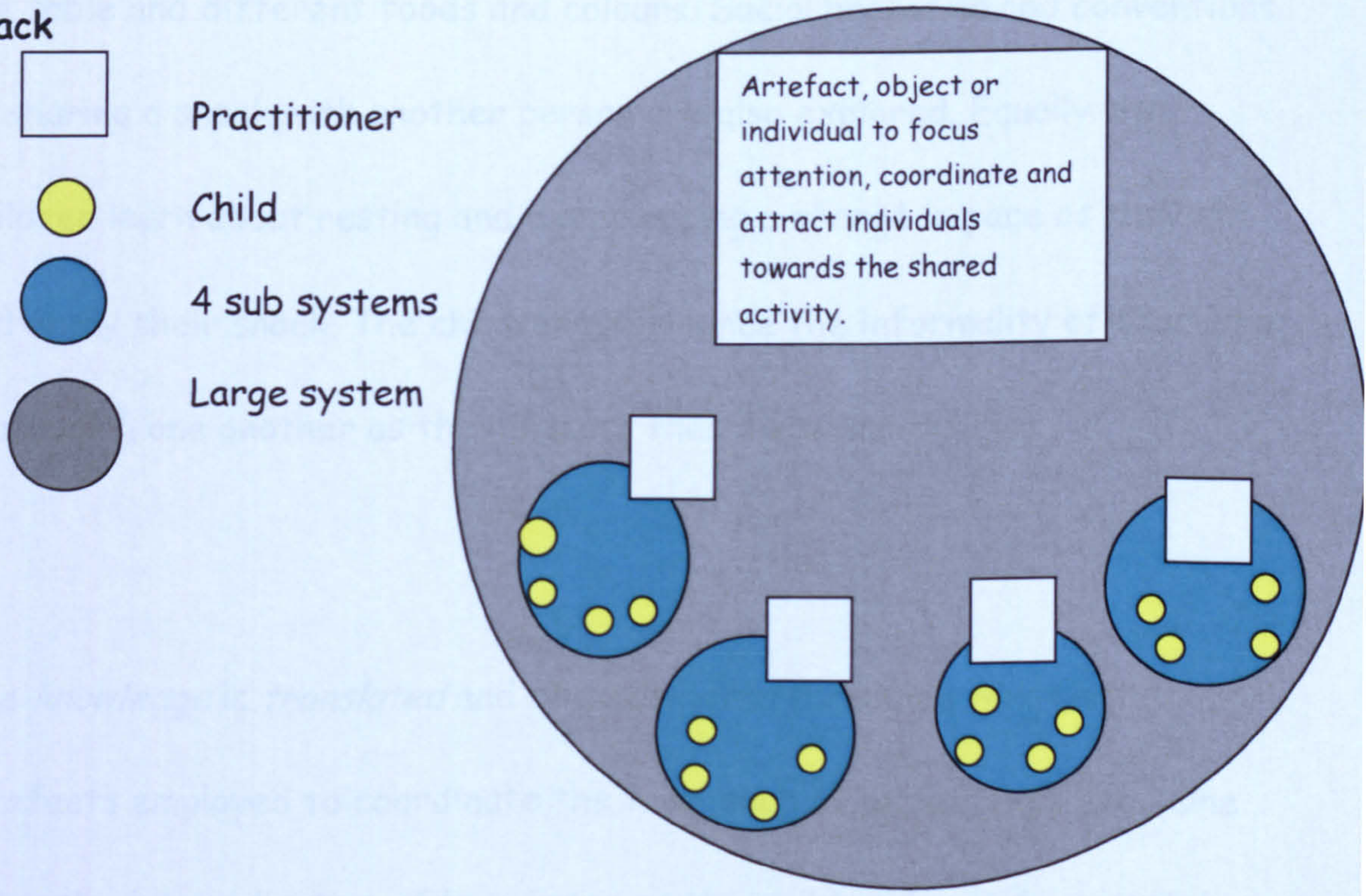
Child 4: 'I like yellow.'

Child 1: Watching and listening to the other children – 'Look - lots colours on plate.'

Interpretation- Distributed Cognition

It can be argued that there are several systems containing the members of the group. The first contains all the children as they sit in a group and the second contains sub systems as the children sit in smaller groups with their key practitioner. This is illustrated in the following diagram. (Fig 11)

Fig 11: Systems within the context of Distributed Cognition during a snack



The goal of the system is to share a snack with one another. In order to achieve this goal each group has a specific role to play both in the

distribution of resources in the actual sharing of a meal and engaging in social conversation. The children *align* themselves to one another and monitor the tasks that each one is doing. For example once child 2 has shared her knowledge of requiring jugs, child 3 then contributes the need for plates. It can be argued that both the practitioner and the resources are coordinating the activity in order to achieve the final goal.

The children develop their *knowledge* and *understanding* of number in terms of matching the correct number of plates to the children seated at the table and different foods and colours. Social protocols and conventions of sharing a snack with another person are also explored. Equally the children learn about resting and experiencing a change in pace as they sit and enjoy their snack. The children experience the informality of sharing a snack with one another as they discuss their likes and dislikes.

The *knowledge* is *translated* and *communicated* through a range of artefacts employed to coordinate the task, such as plates, cups etc. One notes the internalisation of knowledge as the children begin to undertake their roles without the need for the ideas to be first *shared* and discussed in an open forum. What is noticeable over time is that the children require

less prompting from the practitioner in order to achieve the goal of sharing a meal.

Interpretation- Peer Activity

Once again imitation is very evident. I would argue that in this event imitation is a tool for *processing and sharing information.* Indeed, as the child imitates another it also indicates that they are becoming more aware of the group and are thus contributing to a *shared activity* rather than acting alone.

In the larger group *competition* was also important for the *sharing of ideas* and the '*functioning of the system*' (Nardi, 1996, p77). However, when in a smaller group, the focus moves away from the children competing with one another and more towards cooperation. They begin to share their preference for particular foods and demonstrate their knowledge of colour. The aim of the system now moves away from the technical arrangement of resources to the social protocol of sharing a meal, which involves engaging with one another. Competition is not as important as it figures in the larger system. When children are supported in discussion

facing each other and are not competing for the adult's attention, the need for competition lessens. The reason for this change in activity is due to the varying *proximal processes* involved in this particular microsystem. By changing from a larger group to a smaller group the elements *'form, power, content and direction'* (Bronfenbrenner, 1994,2nd edn, p38, refer to Study 1, p141) alter their dynamics and, thus, the context for peer activity.

4.2.6 Event 3: An Ordered Moving Event

Introduction

As part of the daily routine, the children access different parts of the building e.g. the hall for large play activity, or lunch and to go outside. Thus children are collected together to move as one group safely from one area to another. The following two accounts highlight moving indoors having been outside and transferring from and to different parts of the building.

Account 3a

The children have been playing outdoors for approximately twenty minutes. The practitioner goes inside the classroom and returns with a tambourine. Some children nearby notice the tambourine and begin to form a line. The practitioner smiles and gives a 'thumb up' to the children. They smile back.

The practitioner then places herself in the centre of the outdoor area, before tapping and shaking a tambourine. She then puts her hand up. Children nearby copy this action and put their hand up. Other children prompted by other practitioners stop their play and look at the practitioner. One is aware of the children, a few at a time, stopping their play and giving their attention.

Practitioner: 'Time to finish! Come to me.'

Children slowly gather.

Practitioner: 'What do we need to do?'

Child 1: 'Put coats off'

Child 2: 'Put coats off – Take coats off.' The children laugh

Practitioner: Smiles – 'What else?'

Child 3: Points to hat

Child 4: Watches child 3 and imitates

Child 2: Shouts 'Hat'

Children in the group call out 'Hats'.

Child 5: 'I can go fast.'

Child 2: 'Me too!'

The children are then invited to enter the classroom and place their hats, coats etc onto their pegs.

Account 3b

The children are standing in a line at the door of the nursery to move into the corridor in order to go to the hall for lunch. For many children this is now well established. However, the practitioner reminds the children of the need to walk in a line and the reason behind such direction, (to ensure the children don't knock into one another or bump into furniture along the way). The practitioner picks up a symbol of a 'person walking' placed on to a small stick which the children can hold. Children refer to these as 'walking sticks'. She shows it to the children. A few call out 'walk'.

Child 1: Models walking on the spot.

Child 2: Observes and imitates.

Practitioner: Whispers – Are we ready?

Some children say 'Yes' – others nod.

Practitioner: 'Off we go!'

As the line moves, child 3 points forward and taps child 2 who is looking the other way. The two laugh together and start walking.

Child 2 slows down and the gap widens between herself and the child in front.

Child 3 once again taps child 2 on the shoulder and begins to make the sound of a train – 'choo choo.'

Child 2 walks a little faster and the gap lessens.

The practitioner indicates to the children to stop as they reach the first gate.

Child 1 stops and looks behind her and smiles. She puts her hand up in a stop sign.

As the children stop in a line the practitioner gives a thumbs up and smiles.

Once again the practitioner whispers 'Good stopping.'

Interpretation-Distributed Cognition

This may seem a rather odd example from which to explore the notion of distributed cognition. However, learning how to conduct oneself in a large

group is important, for, previously, the children have explored moving safely with their parents in a small family unit. All the key facets of distributed cognition can be located in this event.

The *system* is a group of children moving from one area to another. The goal is to achieve this process in a safe and orderly manner. Once again the practitioner is the main focus in terms of drawing the children's attention in the *shared* activity. The practitioner encourages the children to share their ideas in terms of what they are going to do when they go inside such as removing coats and hats etc. Through the use of the tambourine, words, picture symbols and gestures, the practitioner is able to successfully *coordinate* the group to complete the activity of moving from one area to another. However, the children also facilitate the coordination of the group through gestures such as tapping a child's shoulder and vocalisations, which maintain the movement of the line. The children *align* themselves to one another in terms of watching what they do and share their ideas of how this action should be conducted. They achieve their goal of moving in an ordered manner.

In terms of the underpinning knowledge being explored, the children begin to understand how the Centre is used for different purposes and considers how a large group can move safely within the confines of a building. Such activity prepares them for entry into school life. This knowledge is *communicated* and *represented* in a meaningful way through gestures, facial expressions, pictures and symbols, such as the tambourine and the 'walking sticks'. The children must 'scan' these to gain an understanding of what is expected. The action of the practitioner represents the notion of time in an accessible format for the children to understand. For example, the lining up of the children initiated by the practitioner's instructions indicates that an activity has finished and a new one, is about to begin in a different part of the building. Knowledge is becoming *internalised,* for the use of symbols such as the 'walking sticks' lessens as children perform the task of walking in an orderly way with less prompting from the practitioner.

Interpretation-Peer Activity

Imitation once again figures strongly in this event, although it is very different from the event focusing on the goal of sharing a rhyme. We see children acting as a model for others when *sharing* their ideas. For example child 1 modelled walking on the spot before moving along the corridor. This

in turn led to further imitation and thus enabled the group to begin to walk in an orderly fashion. The modelling and imitation enables the *exchange of ideas* to take place thus allowing the continued functioning of the system.

As before, in account 2a, competition was an important element. By competing with one another it provides the forum for *communicating* what is required in order to complete the task. The need to walk quietly and safely along the corridor is very much part of the hidden curriculum, which allows smooth transitions from one area to another.

4.2.7 Event 4: Registration

Introduction

As part of the registration process children are encouraged to self register. The children find their name card, showing both their picture and their name, before placing it onto a board, thus answering the question 'Who is here today?'. This task is performed at the start of every nursery session.

Account 4a

The time is 9.00am and the children are entering the nursery classroom together, putting their coats and bags on their pegs. One is aware of the noise of chatter as children, parents and practitioners talk to one another. Some children enter the room on their own having already said goodbye to their parents, while others seek the support of their parents, signalled by their need to hold hands. The flow of 'human traffic' moves towards the self registration area positioned in the middle of the room. Practitioners have already placed the children's name cards onto the carpet ready for the activity to commence. There is plenty of room for all to participate without bumping into one another. The children are required to find their picture/name card and place it onto a felt board to indicate they have arrived. Most of the children and parents are very familiar with this particular activity. It is an established feature of the daily routine. Some children complete the task independently. Others require the assistance of either their parent or practitioner. What follows is a piece of dialogue between four children and one parent as they locate their name cards. However, within this group, child (4) and parent (4) have only been attending the setting for three days. This routine is still very new to them.

Parent to child 1: 'Can you find your picture and your name?'

Child 1: 'No, I'm not sure'

Child 2: 'Here it is - look you are wearing your hat.'

Child 3: 'I've done it.' (holds up name card)

Child 2:' Oh I can't find mine now.'

Parent to child 1: 'Your name begins with a R sound and it looks like this.' She finds the letter on a display

Child 2: 'Oh here it is - Silly me!'

Parent of child 4 (new to the setting) watches the children and parents.

Parent 4 to child 4:' Can you find your picture?'

Child 4: Looks at parent then at the cards and points to the correct picture.

Parent 4: Gives child a hug and departs.

Child 1: 'Let's go over there (pointing to the role play area)

Child 2: 'Me go too.'

Interpretation-Distributed Cognition

The goal of this system is to register the children's attendance or absence.

This is achieved through a self registration process. Although the practitioner, as one might expect, is once again the main focus for coordinating this *event* the role of the parent is also particularly important. Each child has their particular role in that they are required to indicate their presence. The children once again *share their ideas and align* themselves with one another through talking about the task.

Here the children are learning to, firstly, recognise their name, secondly, explore the concept of time and those routines associated with particular times of the day such as hanging up coats and hats at the start of the morning, and thirdly, the transition from parent to practitioner. 'Coats and hats off' and the location of a name card indicate the session is about to begin. The knowledge is *internalised* over time and one can observe this process when we compare child 4 who is less familiar with this task than the other children. The children talk about what is required and child 4 follows. Progressively, over a period of six months the chatter regarding the placing of the cards lessens as children complete the task as a matter of routine. Their name cards now no longer display the children's pictures,

and with just their names to find, the children are aided in their transition from using recognisable memory to cued recall.

Interpretation-Peer Activity

What is particularly revealing about this event is the role of the children themselves as facilitators. As confidence grew, the children become noticeably more involved in the coordination and support of the activity. Indeed, in an interview with the children watching this example of interaction, child 2 commented on how he was helping the others and showing them what to do. When asked why he did that, he said' *I always do that. I am good at helping my friends.'* As the children are becoming more familiar with the processes involved in recognising themselves they are able to support one another. The role of *coordinator* is thus beginning to be extended beyond the practitioner to the participants themselves. The children enable each other to complete their specific task in order to achieve the shared goal.

4.2.8 Summary

Distributed Cognition

We see that the notion of distributed cognition can be applied to the Children's Centre. The range of activities may contrast sharply with the traditional 'cockpit' scenario but each *event* clearly contains a focus be it an object, artefact or person which coordinates the individuals within the *shared activity*. The ideas are expressed within an open forum and the interplay between the children, artefacts and the activity itself shapes the peer activity identified in each example.

Distributed cognition takes on many forms. This is to be expected as the range of activities selected is very different. What is particularly interesting is that the *systems coordinating* the individuals within the activity can vary in size. For example, the snack and lunch time activity clearly had an overriding system organising the large group, but then smaller systems developed through the arrangement of the furniture, children, artefacts and the practitioners.

Knowledge is communicated and represented through a range of artefacts, practitioner, parents and the children themselves. The system allows for

this knowledge to be explored and transformed from the inter to the intra domains.

Peer Activity

Within the context of distributed cognition one is aware of the range of peer phenomena occurring repeatedly such as *imitation, competition, and modelling*. This is irrespective of the position of the children, such as in a line, a circle or as a group facing the practitioner. As the children become familiar with varying scenarios, they take on the role of facilitator and guide others through their specific task. The range of peer activity is integral to the functioning of the system itself and the achievement of the desired goal. From the identified observations one notices the children viewing themselves from the perspective of 'we' and 'ours' as opposed to 'I'. In Piagetian (2001) terms there is a shift from '*egocentrism*' to the children beginning to become aware of one another. Distributed cognition illustrates how the context can shape the range of peer activity exhibited. However, the distributed cognition as a context for exploring peer dynamics only examines peer activity within one reality, namely a formal social *event* often structured by the practitioner. The ranges of activities highlighted are thus limited to particular aspects of the nursery day. It

does not explore those realities which focus upon child-initiated activities, that are very much a feature of the nursery day. I propose that through the context of mediation within the framework of activity theory we can examine the third reality and thus encounter other features of peer activity.

Study 3 - Peer Activity Explored through Activity Theory

4.3.1 Introduction:

Study 3 explores the reality of *episodes* of structured mediated activity, by deploying some of the central concepts of activity theory as developed by Engstrom as cited in Cole (1996, p140). This provides both a different and more in depth perspective of the dynamics between the activity itself, and interaction between the peers when compared to the previous study. We thus move on from distributed cognition, which examined the impact of shared activity within four everyday social events, to exploring peer dynamics within five *episodes* of learning activities where mediation is a key feature. The EYFS (2007) makes reference to social interaction through structured activity. It argues that practitioners should,

> *'plan and resource a challenging environment where the children's play can be supported and extended.'* (EYFS, 2007 *viii)

It also suggests that a range of resources can be *'used in many different*

*(viii) 'Learning and Development Play and Exploration' Card 4.1 in the Early Years Foundation Stage (2007)

ways to facilitate children's play and exploration' (EYFS, 2007 *ix). What is lacking here is an examination of cultural mediators, which in my view. are a fundamental characteristic of any educational setting and feature in the construction of knowledge. I therefore intend to explore a series of *episodes* of structured activity focusing on the learner's involvement with some core cultural mediators that also feature in the EYFS. (2007)

4.3.2 Rationale:

In Chapter 2, I argued that activity theory's strength lies in the fact that it can be utilised as a contextual framework or model. One can map the key elements of activity theory onto the observed *episode of* mediated activity and thereby explicate the peer dynamics involved. It is now my intention to apply this contextual framework, as described, in order to reveal the emerging peer dynamics in five *episodes* of structured mediated activity, which I believe will be familiar to practitioners working in the EYFS. Each one is typical of the types of activity children engage in everyday in an early years educational setting. These are as follows:

*(ix) 'Learning and Development Play and Exploration' Card 4.1 in the Early Years Foundation Stage (2007)

1. sand play

2. riding a bike

3. construction

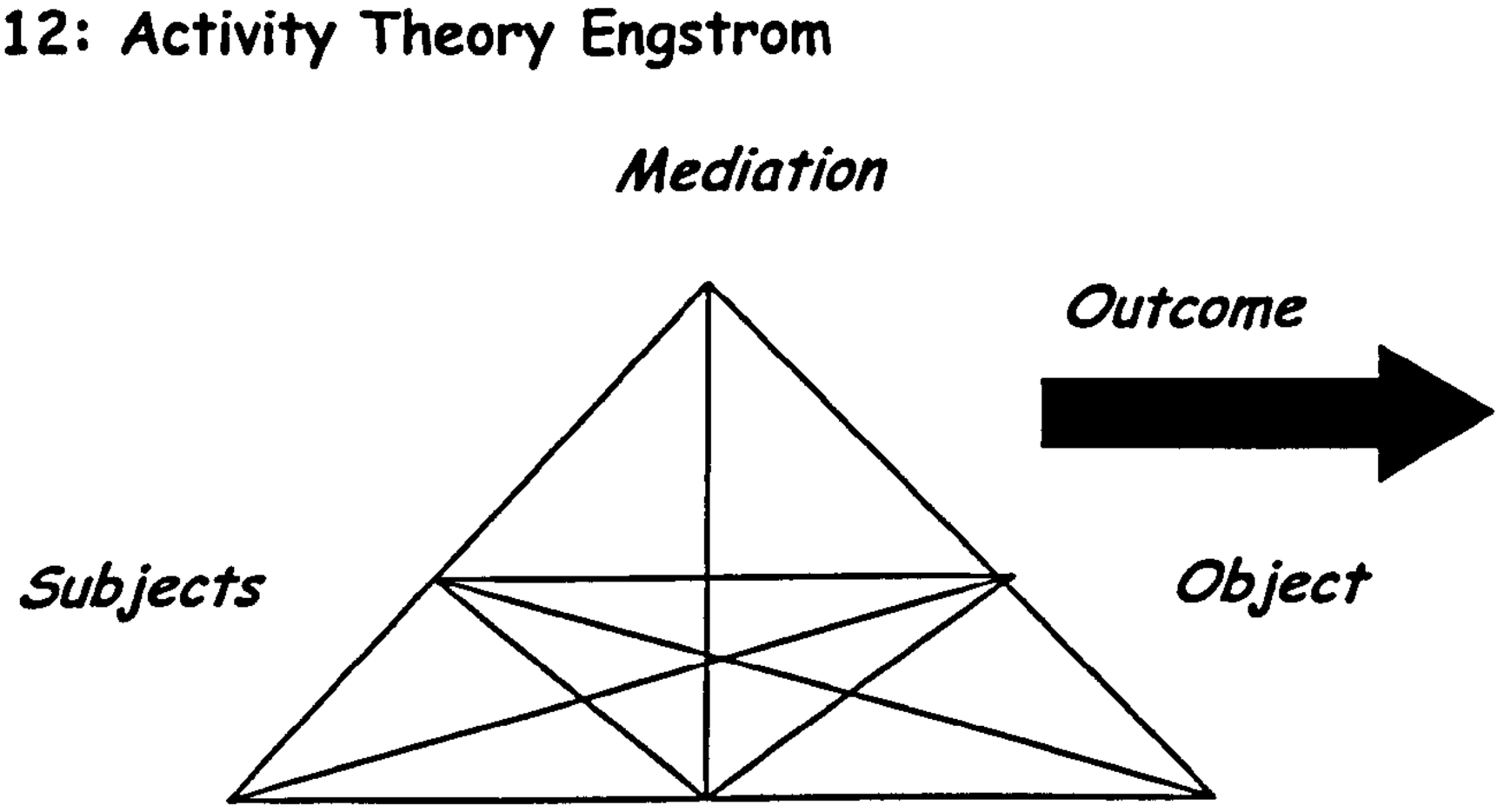
4. role play

5. exploring textiles

Activity Theory – Contextual Framework

To expound further how the framework will be utilised when examining the chosen *episodes* of activity, I will define each of Engstrom's term's as cited in Cole (1996, p140) as the following (Fig 12):

Fig 12: Activity Theory Engstrom



Mediation

This will be explored through three different dimensions – tools, semiotic and personal, which very much reflect how they occur in *episodes* of structured activity within the early years.

Subject

The subject will be defined as the children who are engaged with the activity and thereby interact with the object.

Object

The object relates to the activity the children are engaged in. This could include the sand pit, construction play etc.

Rules

Rules will refer to the set of instructions which allow the microsystems to function. For example, for safety purposes practitioners have stated that only three children at a time can play with the building bricks due to the size of the area. However, rules can also include those the children devise themselves to complete a task such as deciding that one child should always be in the middle of the building area to hold the bricks to prevent them falling down.

Community

The community explores all those individuals contained within the microsystems as opposed to just those involved in an activity defined under the heading of the 'subject.' This will identify not only the children, parents and practitioners, but may also consider the importance of visitors, other professionals and ancillary staff, who may be present within the microsystems, while that activity is underway and yet are not directly involved. They may provide some incidental support or ideas for the completion of the activity.

Division of labour

This explores the differing roles employed by the subjects as they engage with the object. These roles may be defined, for example, by the practitioners, parents and/or the children themselves as appropriate.

****

It is how each of these elements (mediation, subject, object, rules etc) interact with one another, as the child encounters varying types of mediating devices, which is significant for revealing peer activity.

4.3.3 Procedures Followed:

The methodology utilises an observational approach to data collection. The selection and sampling of *episodes* of structured mediated activity have been taken from a range of daily activities identified from List C (Chapter 3, p133, and Appendix 5). Various techniques have been employed to support the collection of observational data, as discussed previously in Chapter 3. These include:

- Discrete and participant observation of children engaged in *episodes* of structured mediated activity within the microsystem of the nursery classroom.

- Interviewing children '*on the move*', a technique based on Clark 's (2004, p145) approach to observing children in their natural setting. (Chapter 3, pp106-108 and p128)

- Interviewing practitioners '*on the move*', once again linked to Clark's (2004, p145) observational techniques. (Chapter 3, pp106-108 and p128)

The observations have been recorded using the following strategies.

- Fieldwork notes

- Digital camcorder, digital camera and audio recording.

The study will provide an account of each *episode* of structured mediated activity. This will be interpreted firstly, from the perspective of activity theory and, secondly, from that of peer activity.

4.3.4 Episode 1: Sand Play

Introduction

At the nursery the children have the opportunity to play with sand using a large sand pit outdoors. Because the children can stand, sit and lie in the sand pit the experience of this medium is very different from when they stand or sit around a small sand tray located indoors. The sand pit provides the children with the opportunity to explore the 'world of work' through role play, such as a builder's yard. The children have the opportunity to utilise large sand play resources, for example, a child size digger controlled by the children pulling different levers, large buckets and spades, in addition to smaller sized buckets and boxes. In this *episode* of structured mediated activity the children attempt to build a large castle.

Account 1a

Three children have chosen to play in the sand, one adult is facilitating.

They intend to build a sand castle and are now exploring filling up different

sized buckets. One child (A) then decides to pour water into the sand pit to mix with the sand.

Child A: 'Let's pour the water in.'

Practitioner points to the buckets to assist child B

Child B: Gets a bucket and follows

Child C observes

Adult asks child C if she wants a bucket. Child C shakes her head.

After a period of five minutes I (Researcher) joined the activity. Initially I sat alongside and watched. Then, I began to fill up a bucket of sand. Child A smiled and child B said 'Hiya'.

Researcher: 'What are you all doing today?'

Child A: 'We are making a big castle.'

Child B: 'Yeah a big sand castle.'

Child A: 'I'm showing them what to do. Me clever'

Child B: 'Yeah I'm clever too.'

After five minutes I gradually moved away from the sand pit. First, I move from the centre of the pit to the edge, and then say goodbye.

Child A waves and says: Bye.

Account 1b

After a period of ten minutes the practitioner has left this activity to attend to another group. The children do not make any comment or acknowledge the practitioner's absence. The children are continuing to try to build a sand castle. At this point they consider introducing boxes as an alternative to buckets.

Child A: 'Only use the buckets.'

Child B: 'Why?'

Child A: 'Cause you don't see boxes in the sand.'

Child B: ' No I want to use the boxes.'

Child C: Goes to the boxes and finds one with string. 'Use this - looks like bucket.'

Child A: 'Yeah, yeah.'

Child B: 'Yeah find another one.'

They continue to fill and empty the buckets. After a period of ten minutes I (Researcher) return to the group.

Researcher: 'This looks fun.'

Child B: 'Look we are using buckets, but we are throwing the boxes away.'

Child A: 'Yeah they are not good.'

Child C 'Yeah but look this is like a bucket, it's got string on it.'

Child B: 'Yeah you hold it, I put sand in.'

Researcher: 'Can I use this box?'

Interpretation Activity Theory – Fig 13: Sand Play

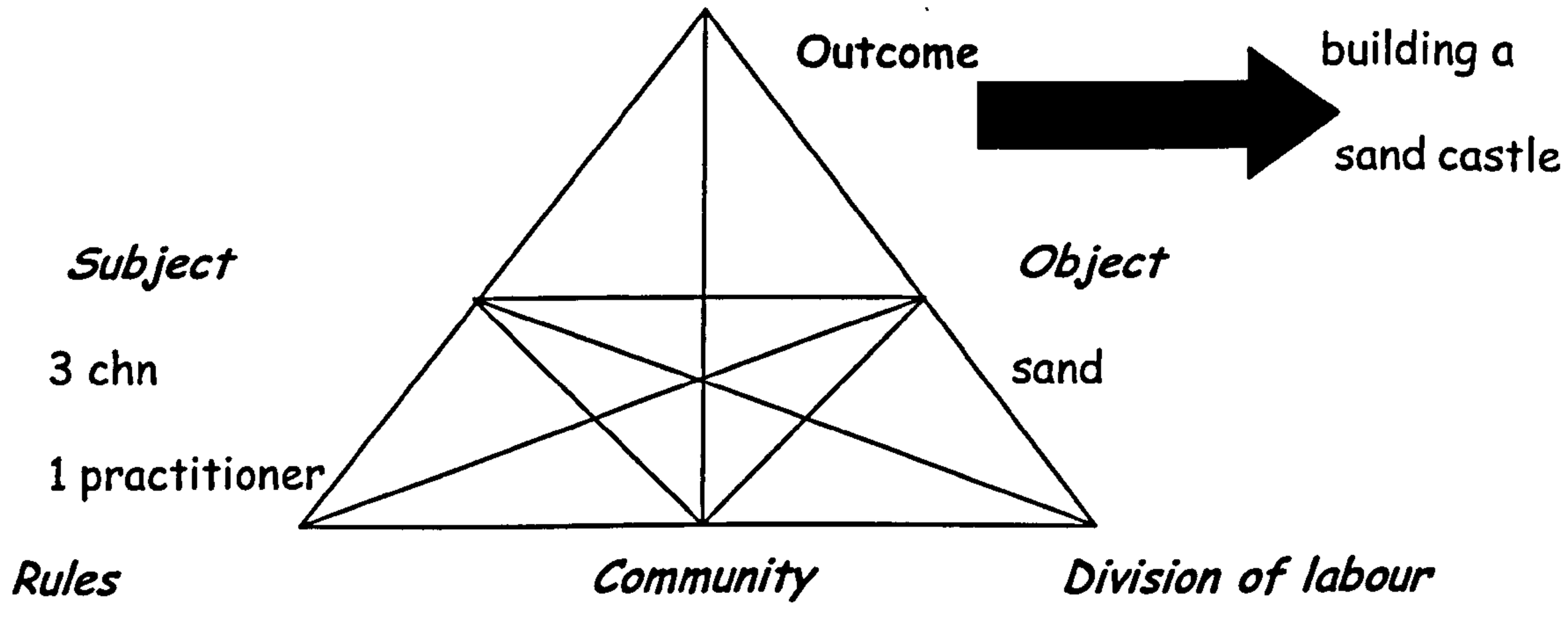
(abbreviations, chn =children)

Mediation

Tools - spades, buckets and boxes of various sizes, water

Semiotic – conveying meaning through instruction

Personal - practitioner/child



Children A and B, very clearly have a joint understanding of their shared outcome. They work within the confines of the nursery *rules,* of no more than four children playing in the sand pit. As the activity develops, there is some dispute as to whether boxes or buckets are the most useful *mediating tool* to complete the task. This conflict over *mediation,* results in child C taking on the role of mediator, and offering ideas to reconcile the difficulty. The practitioner/adult provides support through her interest in the activity. This maintains the pace and intensity.

Interpretation- Peer Activity

The children are focused on their goal/outcome of building a castle.

However, they have not yet decided how to do it. Indeed, it is the conflict regarding the appropriate mediating tool, which produces some interesting peer phenomena. Child C initially, follows and observes the activity of children A and B. Indeed, her role is very different from theirs in that their focus on the *outcome* ensures their involvement. However, child C's role dramatically changes as children A and B argue over the tools to be used. She now takes on the role of facilitator, thus enabling children A and B to continue to lead the activity.

As a practitioner, one may consider child C to be somewhat passive at the start of the activity. Indeed, one practitioner noticed this and tries to draw child C into the activity. When interviewing the practitioner, she commented that she was concerned that child C was not actively involved and therefore *'would not gain anything from the activity.'* However, this view changed when she read the observation of the period after she had left the group. She commented that child C must have been '*taking a lot in, to then sort out the problem of the boxes.'*

4.3.5 Episode 2: Riding a Bike

Introduction

Within the outdoor area, the children have the opportunity to ride bikes of varying sizes. There is a set area with clear paths and road symbols, such as a 'zebra crossing' and a space for 'parking', which the children can use in their play. In this example, the children are exploring through role play, the theme of '*leaving home to ride to work.'*

Account 2

Three boys are playing together. Each has a tricycle. They get on their bikes and ride 1 behind the other in a line. They ride to the hut positioned in the centre of the outdoor area. Child A refers to this as *'Me work'.*

Child A: 'Let's be builders.'

Child B comments: 'Yeah let's do hammering.'

Child A: 'Me bang first.'

Once finished they leave the hut and children A and B go straight to the same red bike. It appears that the basket on the back of the bike is focusing their attention.

Child A wants to do some building.

Child B, takes out a toy phone from his pocket. 'I'm phoning me mum. I forgot me lunch.'

Child A comments: 'You build with me.'

Child B says 'No I want to ring people. You ring like me.'

Child C observes what has been going on. He has not participated in this activity, other than riding the bike and getting off it to go into the hut. He watches the boys playing and talking about building and making phone calls.

He does not make any comments. However, after a short period of time he offers a suggestion.

Child C: 'Take turns.'

Child B: 'What'

Child A: 'You have the red bike. and you (pointing to child B) have this one. (another red bike). Then change.'

Child A: 'I want this bike. I can put my tools in my coat Look I don't need a basket.'

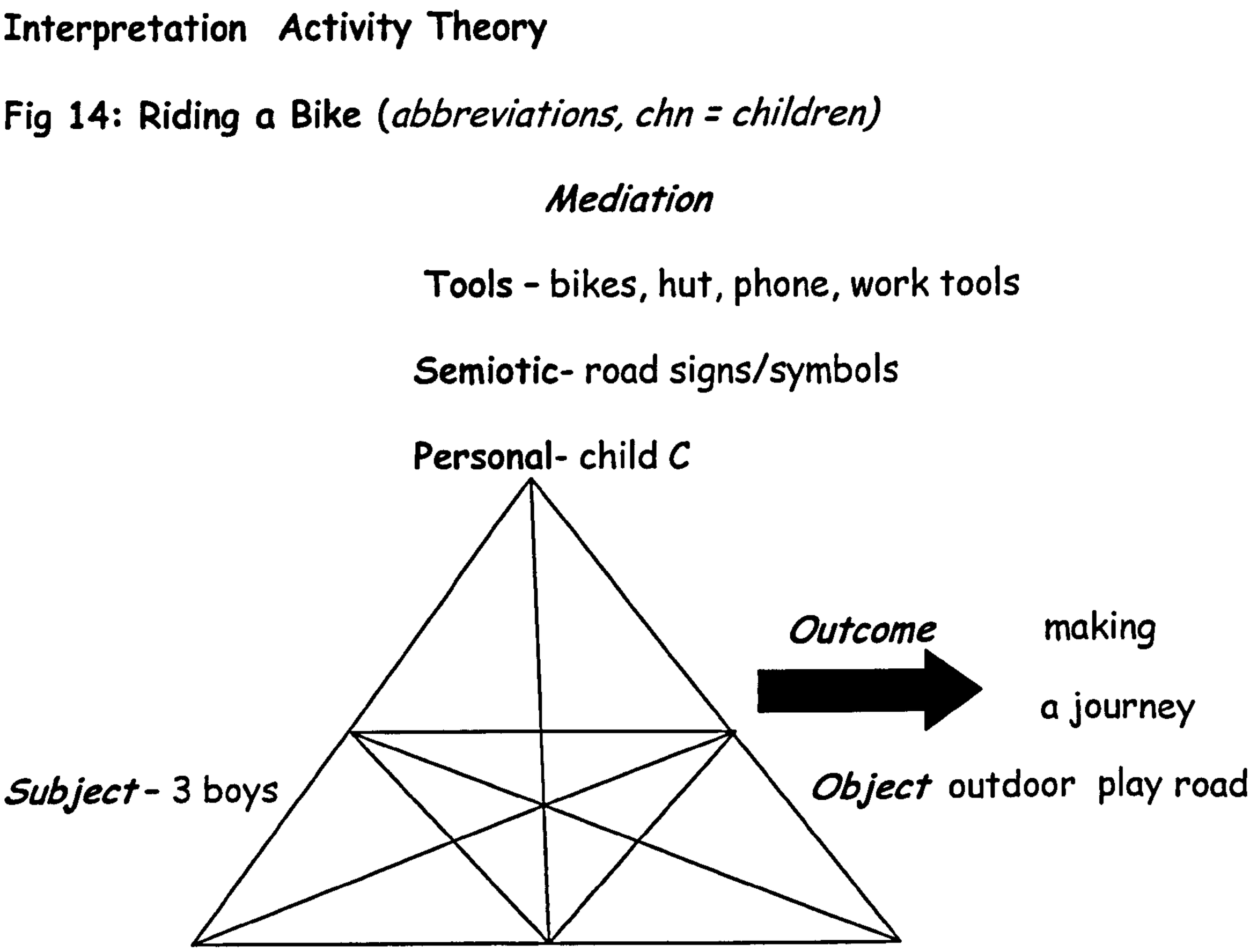
Child A: Shows the boys his pocket. 'See big pockets. I put loads in them.'

Children A and B look at the bikes.

Child A: 'Yeah me first and then you go next, cause you got big pockets.'

Interpretation Activity Theory

Fig 14: Riding a Bike (*abbreviations, chn = children)*



Children A and B, are very *goal-orientated* in terms of making a journey and how this will be completed. The red bike offers some interest in terms of *mediation.* In particular, it is the basket on the back, which presents to the children a means of carrying resources effectively from one area to another. The conflict over the bike draws in other mediating tools, such as a phone, and 'tools of work'. These mediating tools now broaden out the activity from just travelling to work, to now exploring the situation of work

itself. Once again we see the third child (C) offering *mediation* in terms of resolving this issue. Here he refers to his knowledge of how an adult has previously solved a similar problem by encouraging the children to share.

Interpretation- Peer Activity

Children A and B very much take on the role of leaders in this activity, whereas child C observes and plans what action he will take. The levels of interaction vary amongst the children.

Competition is evident in this *episode* of structured activity. Both children A and B very much wanted a particular tool. This type of interaction will be very familiar to many practitioners when children compete over one mediating tool. In order resolve this issue child C's involvement as a negotiator, offers personal mediation. The activity can continue and the goal is achieved. As other mediatory devices are introduced into the activity so the levels of interaction between the children increases.

4.3.6 Episode 3: Construction

Introduction

Having heard the story of the 'Three Bears', the children have been guided by the practitioner, to build a home for The Three Bears, using large wooden bricks. The story book has been placed in the construction area. This task takes place indoors, in an area, designated for such activity.

Account 3

Initially, the children have been picking up and playing with the bricks and placing them randomly on the floor. The children do not talk to one another. After a period of 90 seconds the children begin to engage in their task.

Child A, informs children B and C, where they should stand in the centre of the carpet. Children B and C follow these instructions. They begin to pick up the bricks. Child A takes a brick and places it on the floor.

Child A points to child B: 'Your brick'.

Child B follows and places the brick on top of child A's brick.

Child A then points to child C – 'Your brick?' Child C: 'Yeah'

As they begin to build, child B offers ideas in terms of how high the castle should be, and begins to demonstrate how to lay the bricks. He initially

chooses colours as a motivation for designing the castle. Size is not considered. Child A begins to follow the instructions, but becomes very frustrated as the castle falls over. Child C however, after following child A's instructions of where to stand, has not taken any action. He is observing. Child A sees the adult and shouts, *'This is rubbish the bricks won't stick together.'* The practitioner suggests that the size of the bricks is important and models placing the larger bricks at the bottom of the tower.

Child C begins to pass the bricks to the practitioner.

Child B comments: 'Yeah yeah that's right, good'.

Children A and B begin to build with some speed and within a minute the walls are constructed. Child C observes them again. As the walls are being built he then begins to add some bricks to the walls.

Child C comments: ' This (castle) is really high, bigger than our house!'

Child A and B smile

Child A comments: 'Yeah let's make it really really big'.

The children stop building the castle when it reaches their waist.

Child A: 'Finished'

Child B: 'Yeah'

Child C gets his teddy and places it in the middle.

Children A and B follow and get their teddies. They smile and appear pleased with the final result.

Interpretation Activity Theory

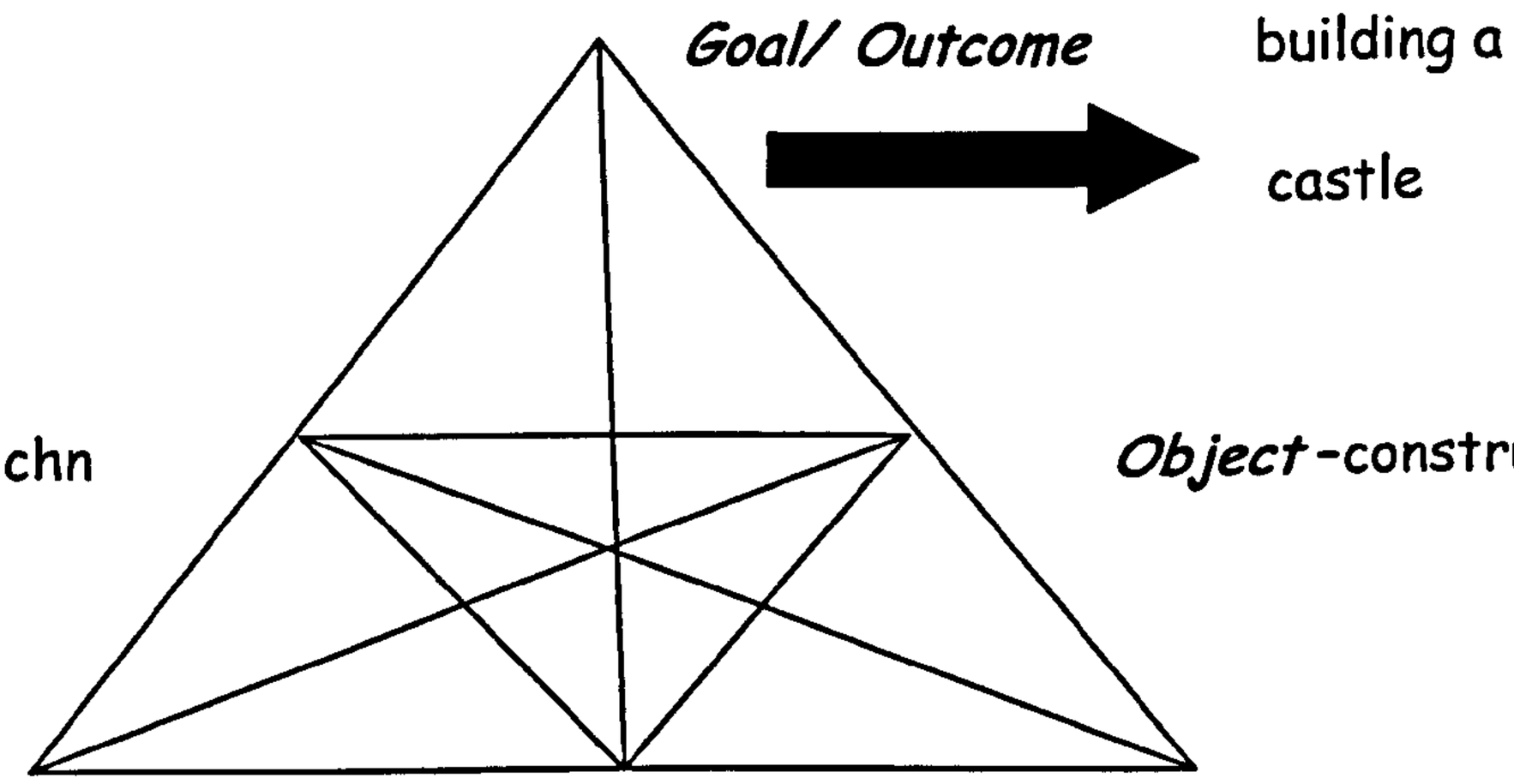
Fig 15: Construction (*abbreviations, chn = children)*

Mediation

Tools - bricks, teddies

Semiotic- story book

Personal -child and practitioner



Rules

No throwing bricks

Community

10 chn

2 practitioners

Division of labour

co-ordinator

teacher

observer/follower

Child A is very *goal-orientated* and clearly knows what he wants to do. However, the children are particularly frustrated in this *episode*. The bricks fall down. One can argue, that initially, this is an unmediated activity in that children interact with the stimuli (bricks) directly. The children find it difficult to complete the task. The outcome initially results in the bricks falling down. However, *mediation* from the practitioner alters the outcome. As she shares her knowledge of how to build a tower the children quickly adopt her ideas and the pace of activity quickens, suggesting that the mediatory device of the brick as a construction tool is now being more fully explored. Finally they achieve their goal.

Interpretation- Peer Activity

Child A very much dominates this episode of activity. He both demonstrates and teaches children B and C in terms of how to build a tower. It is his focus on the final goal that results in the activity commencing. He coordinates the task by sharing his ideas. Both children B and C follow instructions. They do not challenge the ideas until the tower falls down. Child A's frustration at failing to build a castle results in him seeking the attention of a practitioner. This clearly demonstrates how mediation supports a child to overcome their limitations and deal with their

frustrations to eventually achieve their goal. Child C's response is particularly interesting, as initially he does not participate in the activity as a leader, and only follows instructions for a short period of time. Children A and B are very much the main figures in this activity. To understand child C's response I suggest that this can be explored through situated action as a means to examine his membership in the group. This is explored in Study 4.

4.3.7 Episode 4: Role Play

Introduction

This activity explores the storytelling of The Three Bears through drama.

This tale has been told several times to the nursery class over the week using props, such as puppets and artefacts including, bowls, spoons, chairs etc. The children have now been given the opportunity to re-enact the story in a defined area of the room which has been set out as the '*Three Bears*' home. Although the area, in terms of resources and layout has been planned by the practitioner, the activity on this occasion is not being facilitated by the adult. The children can take turns to enter the house.

Account 4

Two boys and one girl have entered the role play area and have now adopted their roles.

Child A (Father bear) tells the children that he will need to go to work soon.

He begins to make porridge and tells child B (Mummy bear) that 'I am good at making porridge'.

Child B looks up at him and then looks down at her bowl and continues to mix a bowl of imaginary porridge using a large wooden spoon.

Child C (Baby Bear) watches child B and pretends to drink from a baby bottle.

Child A, 'I am going to work.' He walks to the sink on the other side of the room and then returns.

Child B and C continue with their individual activity of mixing porridge and drinking from a baby bottle.

A fourth child (D) joins them. She has been watching the play for some time at the edge of the play house. Child D now enters the house.

Child A (The Father bear character), says 'You can't play, there are enough.' (Meaning there are enough children to play the game.)

Child B (Mother bear) however comments that 'She can, cause there are only 3 in the house and we can have 4 - look'. She points to the number four above the door of the house.

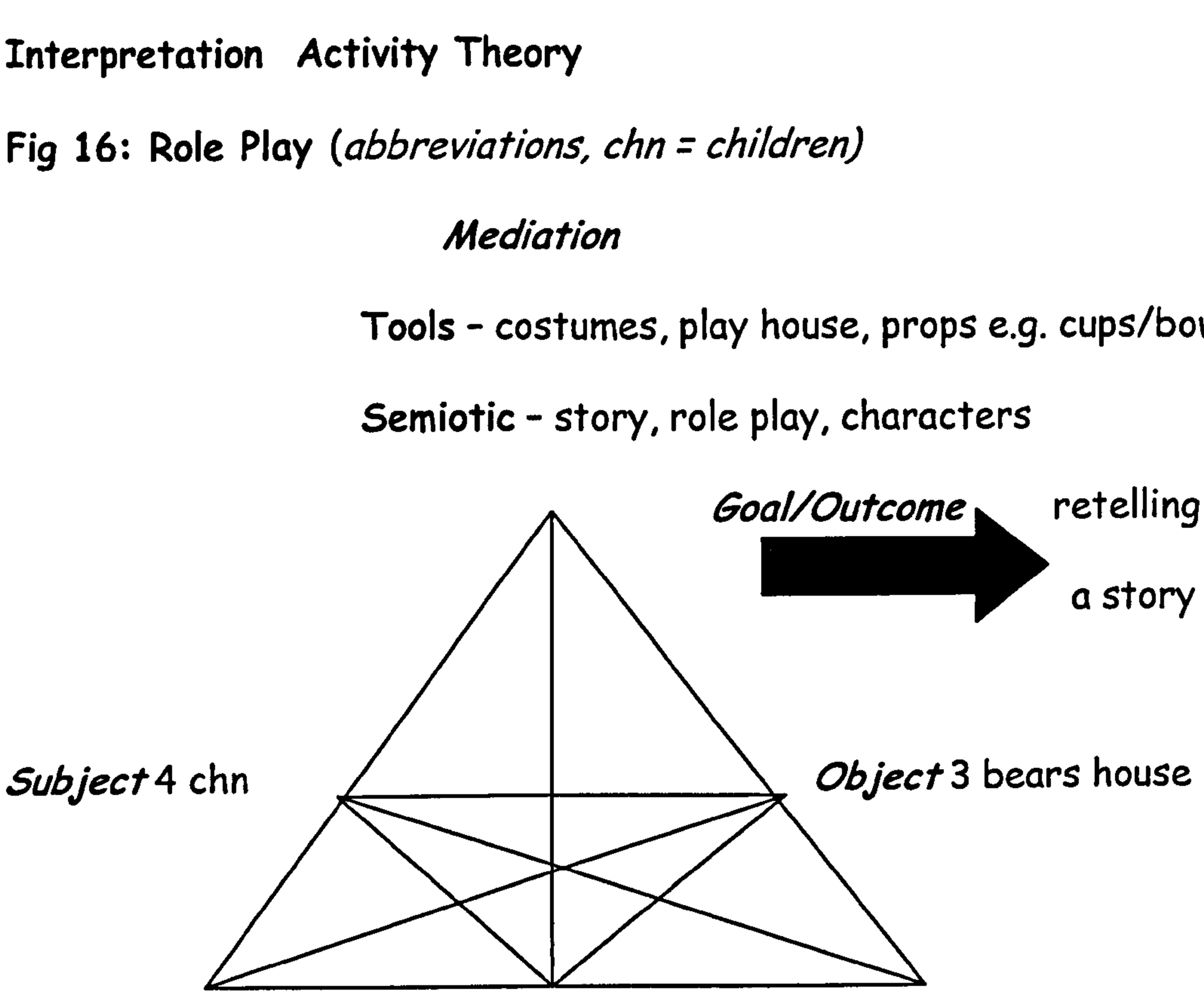
Child A: (Father bear) 'Oh yeah. You can be Goldilocks if you want or another baby. We can have 2 babies.'

Child D (Observer) smiles. She then chooses a bottle and imitates baby bears play.

The children (AB&C) continue to play this game remaining in their roles for a further eight minutes. During this time however child D adopts the role of Goldilocks and begins to brush her hair and pretends to eat porridge from each of the bowls. This is not challenged by the other children.

Interpretation Activity Theory

Fig 16: Role Play (*abbreviations, chn = children)*



In this *episode, mediation* is offered through the use of tools or props and the story itself. The division of labour is very clearly defined, as the roles children undertake are structured via the story itself. They have a joint understanding of the story and the *outcome,* as they have had the opportunity to explore this theme several times before and, thus, are able to create the characters. The tools or props are very important, as they enable the children to re-enact the story. The rules of the activity are

used to support the division of labour, in that no more than four children are allowed to enter the play house, as there are only four costumes available (Daddy, Mummy, Baby Bear and Goldilocks).

Interpretation-Peer Activity

In terms of mediation, it is the narrative and the subsequent role play to re-enact the story, which dictates the structure of the activity and thereby influences the peer dynamics. Here, the children are required to take on imaginary roles and act accordingly with one another. Children A, B and C are very focused and clearly understand their roles as they put on the various outfits. As each role is defined through the story, this very much dictates their activity. However, it is child D who is particularly interesting in terms of peer activity. She does not appear to have any role and is challenged by child A as to whether she can enter. Child B however, is quick to point out that she can indeed join the group as up to four children are allowed. Child D is an observer and once again I believe this can be explored more fully through the application of situated action.

4.3.8 Episode 5: Creative Activity

Introduction

Three girls are engaged in creating a magical carpet using different shapes, colours and resources. They have a story book entitled 'The Magic Flying Carpet' nearby and refer to it as they create their own carpet. The children have a range of tools available to them including paper, glitter, glue, scissors, cloth, and ribbons. The activity is not practitioner led, although she does offer support when asked to do so.

Account 5

Three girls are at the craft table. They stand around the table, two at one side and one on the other. They are facing one another.

Child A picks up several ribbons and pulls them across her hand. She laughs: 'It tickles.'

Child B comments: 'Do it to me'

Child A takes hold of child B's hand and draws the ribbons across it. They both look at one another and giggle. Child A puts the ribbons down. Child C is sticking various materials onto her 'magic carpet'. She watches children A and B as they play with the ribbons, but does not ask to join in. Child A

picks up another ribbon. The activity is not practitioner led although she does offer support when asked to do so by the children.

Child A: 'I'm going to use ribbons on mine.'

Child B: 'Yeah so am I but, I want glitter too. I like glitter.

Child A: 'I am going to use the big glitter. It looks really great.'

Child A begins to stick the ribbons down onto her paper, but I notice she is becoming increasingly frustrated as the pieces of ribbon fail to stick down. Child B watches her and then tries to help. She places both hands on top of the ribbon and jumps up and down, in an attempt to stick the ribbons onto the paper. She pushes it to child A, who then picks it up, but the pieces fall off again. Child A picks up one ribbon and throws it on the floor. Child B watches and sucks her thumb. Child B walks towards to the practitioner who is nearby, pulls at her sleeve and points to where child A is standing, who is by now starting to cry. The practitioner comes over and gives child A a hug. She (practitioner) picks up the ribbons and then gets some more glue. She shows children A and B that they need more glue as it is beginning to dry. Child C who has been at the table has continued to make her carpet throughout this *episode* of activity. She has, over the period of time, looked up from what she is doing four times to watch children A and B, but

each time has then returned to her task. Children A and B begin again to make a carpet. The practitioner leaves them to move to another group.

Interpretation Activity Theory

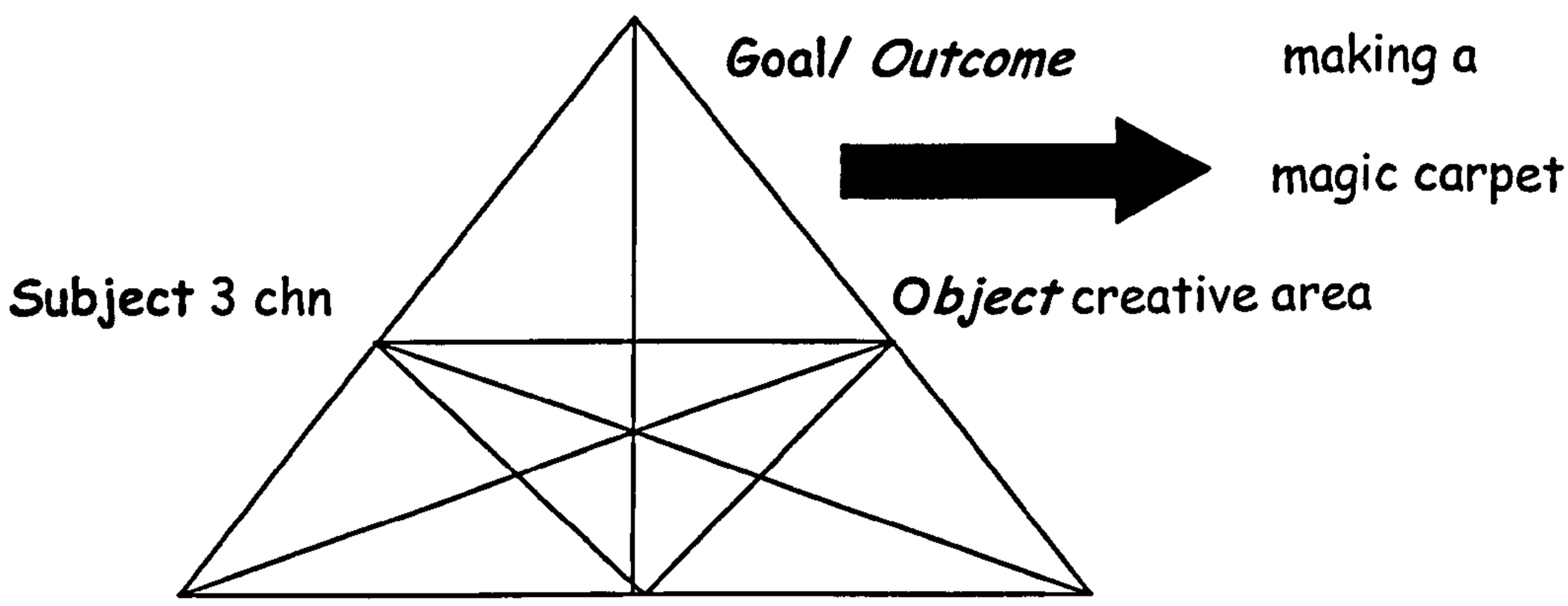
Fig 17: Creative Activity (*abbreviations, chn = children)*

Mediation

Tools- paper, glitter, glue, scissors, cloth, and ribbons,

Semiotic - story books

Personal - children, practitioner



Rules	Community	Division of labour
No more than	7 chn	2 explorers
4 chn	1 practitioner	1 observer

Once again we can see evidence of unmediated and mediated activity. Child A and B lack the knowledge regarding using glue effectively, and they become frustrated. Although the children attempt to utilise three levels of

mediation it is the *personal* dimension of the practitioner that is crucial to enabling children A and B to achieve their goal. They begin very much by exploring the materials available. However, they have not as yet identified how they will *achieve their goal,* in terms of what resources they will use to create their 'magic carpet'. They do offer each other support in terms of sharing ideas. This contrasts sharply with child C who is very *goal orientated* and works quickly and quietly on her task using the mediatory devices effectively.

Interpretation-Peer Activity

What is interesting here, is how the awareness of one's task and goal impacts upon the peer activity. Although children A and B wish to create a 'magic carpet', they are unsure of how to use the varying textiles. Their exploration of these materials, results in them imitating each other's ideas. This imitation supports the development of ideas, although it does not resolve the issue of sticking down the ribbon. They do not compete with one another over the desired goal as observed in previous *episodes* of mediated activity. Conversely, child C does not imitate the actions of children A and B. She is focused on her task and, although, she observes

the other children, this does not impact upon the development of her magic carpet.

4.3.9 Summary

Activity Theory

What has been particularly effective about using the activity theory framework as identified in each of the five *episodes* of structured mediated activity is that it facilitates the analysis of the complexities involved. One's attention is not simply focused on the outcome, but also the interplay between the various elements, which structures the activity itself. Mediation impacts upon the development of the activity, as one can explore how the children utilise mediating devices to achieve their agreed goal. However, what has been equally revealing is the consideration of how the rules, as defined by the practitioners and the children, influence the ways in which the children use the mediating artefacts. Equally, the division of labour sensitively draws one's attention to the roles children adopt as they engage in mediated activity. This allows one to begin to describe and observe patterns of peer dynamics as they emerge from the activity.

From my perspective, the value of using Engstrom's Activity Theory Triangle as a contextual framework lies within its structure, which enables one to identify the intensity of mediated activity. However, there is a danger that one focuses too heavily on each of the elements. One can lose sight of the activity as a whole, by compartmentalising each element as it is mapped onto an observed *episode* of activity, and thereby, one can to some extent fail to note the flow of activity.

Peer Activity

By analysing the interplay of the varying elements, one can observe how these create the context for peer activity. It is as children attempt to employ mediating devices, that one begins to observe varying patterns of peer dynamics emerging. For example, as children take on the role of mediation when engaged in an activity, they adopt many different roles. They may coordinate, negotiate, collaborate, follow or lead the group. Some may compete over the use of mediating tools as they explore the most appropriate route to reach their agreed outcome. Observation is utilised to support the development of ideas, while imitation is used to communicate to each other the agreed outcome, by following each other's actions.

However, in two *episodes* of mediated activity, namely construction and role play, I noted that two children, who were on the outskirts of the activity were not fully involved. This aspect of peer activity cannot be fully explicated through the notion of activity theory alone, as it does not allow one to consider the development of their involvement in the activity. Indeed, I consider the notions of situated action and '*Legitimate, Peripheral, Participation*' (Lave and Wenger, 1991), discussed in the following study, to be the most appropriate contextual framework to more fully examine such features of peer activity.

Study 4 - Peer Activity Explored through Situated Action

4.4.1 Introduction:

This final study focuses on three *interludes* of social activity of a generally open nature during the nursery sessions, which include scenarios of waiting in the reception area for the nursery session to begin and play activities in the classroom itself. These provide the opportunity to explore the final *reality of free association.* As the practitioner is less of a focus in these activities we can hopefully observe greater peer involvement, thus providing the opportunity to examine '*reflexive co-construction'* (Siraj-Blatchford, 2002, p10) amongst the peers themselves. In contrast to the previous studies, the focus is on activities without formulated intentions and so improvisation and emergent structures may feature more. We have the opportunity to observe the children as they interact with their environment and in so doing follow the activity as it emerges. Although ideally we would wish to study situated action through totally open situations, this was not possible with such a young age group as adult supervision is always required. However, it has been possible to select relatively informal social situations where the children experience a good deal of freedom within the constraints of a secure building.

The EYFS (2007) argues that problem solving and creativity are important aspects of early years pedagogy. It emphasises the importance of

> *'providing flexible resources that can be used in many different ways to facilitate children's play and exploration'* (EYFS, 2007 * x).

We thus have an opening to explore peer activity where children are allowed to explore spontaneously without intense adult attention or direction.

4.4.2 Rationale:

It is my intention to examine the unit of analysis for situated action as defined by Nardi (1996), namely the '*activity of person-acting in setting*' (1996, p71) approach and thereby understand the relationship between the individual and the environment. What is key to this process is that one considers the immediacy of activity as it emerges out of the situation. We can observe the goals as they develop and evolve rather than identifying the considered outcome for each *interlude* of activity.

*(x) 'Learning and Development Play and Exploration' Card 4.2 in the Early Years Foundation Stage (2007)

I have, therefore, explored and applied the main themes as discussed by Nardi (1996) and Lave and Wenger (1991) to selected *interludes* of activity as examples of situated action. These can be summarised as the follows:

- Situated action takes place within an *arena* such as a room or area with a particular purpose which provides the framework or environment from which the activity can evolve.

- One can observe the '*person-acting in setting*' (Nardi, 1996, p71) relationship by analysing,
    - the notion of *spontaneous problem solving* as children freely explore their environment,
    - *moment by moment flow of activity* which is not directly structured by the adult.
    - and '*Legitimate Peripheral Participation*' (Lave and Wenger, 1991) – the notion that the desire to explore one's surroundings is linked to one's motivation to become a *member of a community.*

The Children's Centre as a context for early education does indeed perfectly illustrate situated action. This study will draw its findings from

two microsystems, namely the reception area and the nursery classroom which form the *arenas* to allow one to observe the following *interludes* of ongoing activity

- Waiting in the reception area for the session to begin.

- Engaging in two play activities in the nursery classroom.

By observing the children within the proposed *arenas* through the '*person-acting in setting*' (Nardi, 1996, p71) approach, we have the opportunity to explore and describe some patterns of peer dynamics at those times of the day when children freely interact with their environment without structured adult intervention. This will complement the evidence gained in the previous studies of coordinated *events* and *episodes* of mediated activity and thus create a more complete picture of how varied peer dynamics can be within this age group.

4.4.3 Procedures Followed:

Observational approach to data collection is applied. Selection and sampling is taken from Lists B and C in the Methodology pp132-133. Observational data has been collated through the following methods.

- Discrete observation of children within the different microsystems.

- Interviewing the child '*on the move*' a technique based on Clark's (2004) approach to observing children in their natural setting, (Refer to Chapter 3, pp106-108).

- Staff interviews '*on the move*', (Refer to Chapter 3, p128).

The observations have been recorded using the following strategies.

- Fieldwork notes

- Digital camcorder, digital camera and audio recording.

Each *interlude* of situated action is presented as an account and followed by interpretation, firstly from the perspective of situated action and secondly, from that of peer activity.

4.4.4 Interlude 1: Waiting in the Reception Area

Introduction

This area provides a very important role in terms of welcoming families, aid supporting child integration in and subsequent separation from the parent. The arrangement of resources quite clearly facilitates this role. Furniture

is provided for both children and adults to participate in a variety of activities, including reading books, counting games, and puzzles. Six child-sized chairs are positioned around a low table on one side of the reception area, while on the other there are adult sized chairs arranged around a table. As the reception area is placed next to the Centre's office, one can hear the phone ringing and adults talking. On occasion adults walk through the reception area to access other parts of the building. Children who arrive early may wait each morning in the reception area for the nursery session to begin. Although this might seem an unusual example, as the interlude of waiting for the session to begin takes place, it clearly demonstrates the key elements of situated action.

Account 1

As the children enter the reception area at 8.40am, they initially sit next to their parent or on their parent's knee. In total there are five children with their parents (four mothers and one father) and chatting between children and parents can be heard. One child (1) was observed after parental encouragement, to look at a book. The parent is still very much involved and the child is holding their parent's hand. The remaining children observe the child and parent, and also each interact with their own parent.

During the next three minutes another parent takes their child (2) to the puzzle table and begins to demonstrate how to insert the pieces. The child observes and claps her hands when this is completed. The remaining children watch this process while still interacting with their parents. The child (1) who is sharing a book climbs down off their parent's knee and sits alongside the child who is completing the puzzle. She (child 1) observes him (child 2) and then selects a puzzle. The child (1) only engages with this activity for thirty seconds and then returns to the book box. The child's parent (1) has moved to the other side of the reception area and begins to chat with the other adults. The sounds from the parents chatter increases.

As before, the remaining children continue to observe the activity.

However two more children (3 and 4) move away from their parents and select a book, then a puzzle, and a book once again. The two alternately turn the pages of the book. Once completed, both put the book back in the box and choose another one. They look at the book in the same way as before. One sits at the table, while the other sits on a bean bag near the table. There is now only one child (5) who is sitting with their parent. He moves away from his parent, selects a book, but then returns to his mother.

He lifts his head to observe the other children for a few seconds and then returns to the book.

After a ten minute period, the children are called to leave the reception area and to move down the corridor to the hall for a singing activity. The chatter amongst the parents changes as they now attract their child's attention to follow the practitioner.

Interpretation-Situated Action

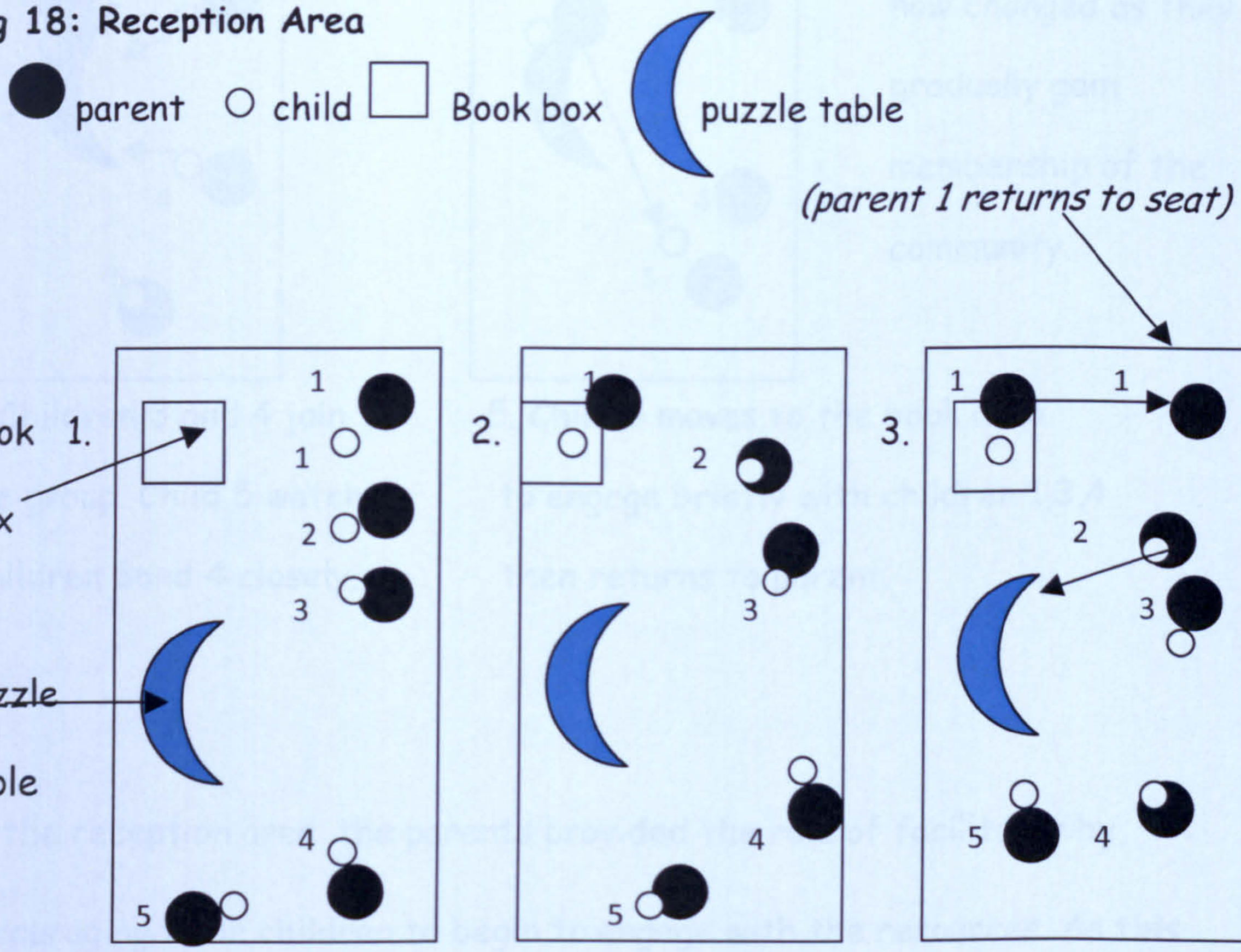
The reception area, with all its furniture, provides the *arena* for this *interlude* of activity to take place. Parents and children clearly know what is expected by the arrangement of the furniture and resources. It is the books and puzzles which draw the children's attention to explore the reception area. Interacting with these resources involves problem solving, as exhibited by child 1 who needed to find an alternative place to sit as the area around the book box was fully occupied. We can observe a *moment by moment flow of activity* as the children move towards the resources in order to access them, find a place to sit and if necessary seek help. There is no clear goal at the outset, as the children enter, other than to wait for

the nursery session to begin. Their intention to read a book or explore a puzzle slowly evolves from the interaction with their environment.

This particular episode clearly demonstrates the notion of '*Legitimate Peripheral Participation' (Lave and Wenger, 1991).* The children on entering the reception area, sit with their parents. There is considerable observation of each other. The group could be considered as one *community.* It is not until a parent and child alters position and begins an activity of shared joint attention, when looking at a book, that this pattern of behaviour changes. We gradually see the involvement of other children into the central activity. This process is now developing a *sub-community* within the larger group. It can be argued that the desire to be a member of the smaller community, namely the child and the parent reading a book, is the main motivation for this change in activity. As the children watch the two main members of the new community, they begin to explore what is expected or what can be achieved while waiting for the nursery day to commence. The children are participating in an *interlude* of waiting. The children and parents use the resources in different ways to manage the issue of waiting for the nursery session to begin. For example, child 2 and 3 simply turn the pages of the books as part of a game of imitation, while

other children read a book with their parents. Lave and Wenger's (1991) notion of '*legitimate peripheral participation*' can be applied to this *interlude* of waiting. This transition of movement is illustrated below. (Fig 18)

Fig 18: Reception Area

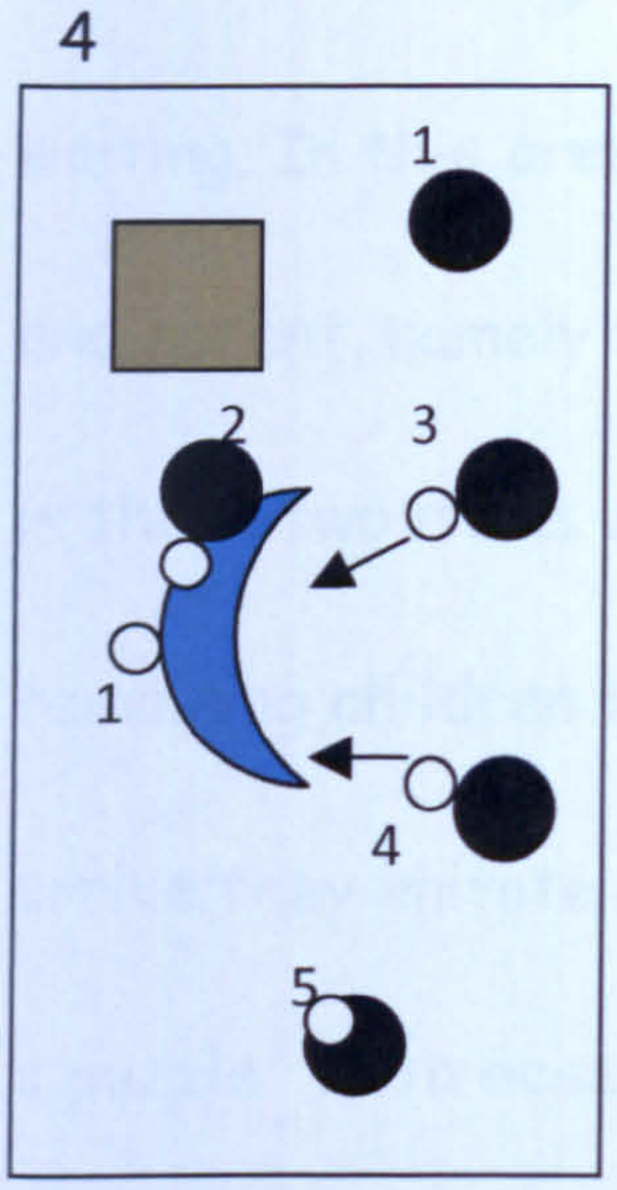


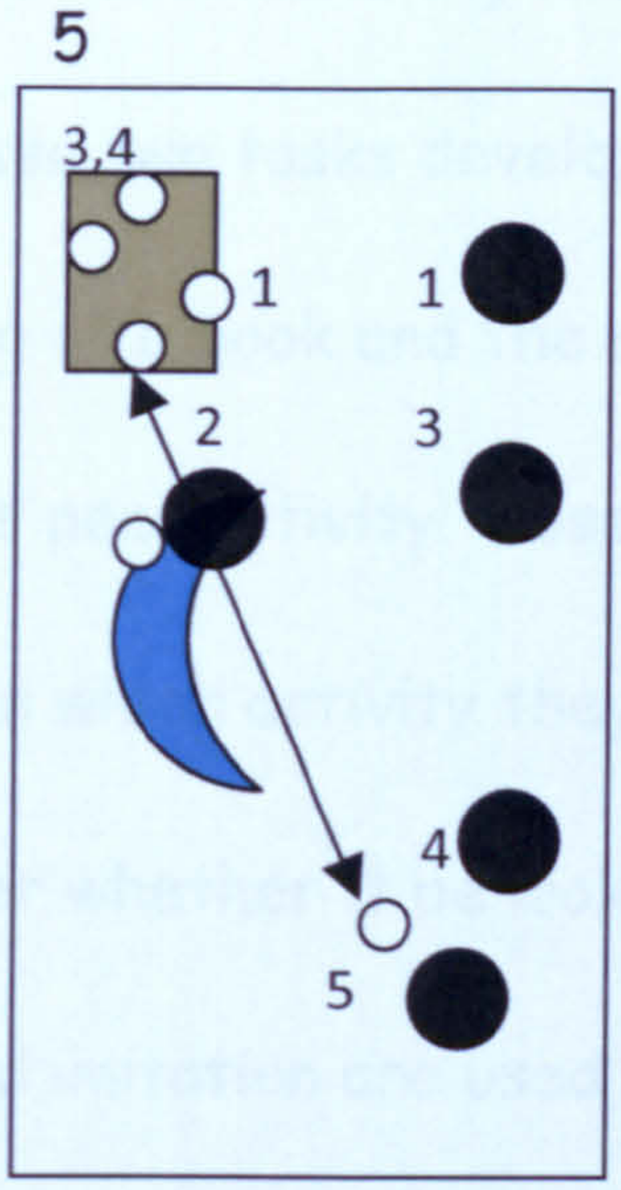
1.Children/parents sitting around the edge of the area

2. Child/parent 1 move to the book area.

3. Child/parent 2 move to table.

Children gradually move to engage with the resources.





The placement of the children/parents has now changed as they gradually gain membership of the community.

4. Children 3 and 4 join the group. Child 5 watches children 3and 4 closely.

5. Child 5 moves to the book area to engage briefly with children 1,3,4 then returns to parent.

In the reception area, the parents provided the role of facilitator by encouraging their children to begin to engage with the resources. As this engagement, develops the parents withdraw and the children define the community. Indeed, they begin to respond to the fact that there isn't enough space and thus move the furniture/resources to different areas within the reception arena. The adult is important for supporting peer activity, but this interaction is also determined by the child's sense of readiness to leave one community (parents) and join the next (children).

Interpretation-Peer Activity

Children observing one another are dominating features of this *interlude* of waiting. In this *arena* we can see two tasks developing between the child and parent, namely the reading of a book and the completion of a puzzle. It is these two items which focus peer activity. Observation is used by the remaining children to ascertain which activity they will select. When they arrive they imitate one another whether it be looking at a book or tackling a puzzle. Both observation and imitation are used primarily to assess the situation with a view to becoming part of the group. The lack of chatter amongst the children is indicative of just how important the process of watching and imitating is. On an *etic* level, one can describe the looking at a book between child 3 and 4 in terms of actions observed. We see the book being picked up and a turn-taking game developing as they alternately turn the pages. From an *emic* angle, one can draw the meaning from these actions. The book is utilised to manage boredom while waiting. In the case of child (1) and parent (1) reading a book, they do so to seek a shared understanding from the text and pictures. However, for children 3 and 4, it is not the text itself which is of relevance, but the use of imitation and turn- taking to manage the passage of time. In contrast to observation under the headings of 'distributed cognition' and 'activity theory', one is very aware that interaction between the children evolves slowly. There is

not the pace or sense of urgency that was observed when children were exploring number on the carpet or when they were participating in a structured, mediated activity. The pace is slow.

The presence of the parents impacts upon peer interaction in different ways. Some children seek independence from their parents in order to engage in their own activity, while for others (child 5) one can observe a tension between the child wanting to join the group, but also remaining with their parent.

This is one example of peer activity through situated action. But how does this compare to peer activity within the nursery classroom? Can we expect a similar gradual transition into the *community*?

4.4.5 Arena-Nursery Classroom

To explore situated action within this microsystem, I shall examine two activities already discussed within the area of activity theory, namely construction and role- play. It is the application of '*Legitimate Peripheral*

Participation (Lave and Wenger, 1991) in the early stages of these activities and its impact upon peer activity, which is particularly revealing.

4.4.5a Interlude 2-Construction

Introduction

The construction area in the classroom is a large expanse of carpet where building bricks, 'Lego' and 'Duplo' are accessed. There are pictures on the walls in the area which show a range of models and projects that have been completed.

Account 2

Three children are in the building area. They are picking up the bricks and putting them in different places. They do not talk to one another. One is aware of the noise of the bricks as they fall on top of each other. After approximately forty seconds the boys begin to talk to one another

Child (A) 'Can you put your bricks here?'

Child (B) and (C) follow instructions.

Child (B) 'Put the bricks here with the other red ones - look like this'

Child (B) 'Let's make the castle this high. Use the red ones first.

These are stronger then use blue ones next.'

Child (C), however, continues to observe what is going on. Although part of the group, he is not fully involved until the practitioner joins the activity. Child (A) experiences considerable frustration as the castle keeps falling down, so the practitioner models how to place the bricks correctly. Child (C) passes the bricks to the adult.

Child (C) comments 'This (castle) is really high, bigger than our house!'

Child (A) and (B) respond very positively to his comments and are noted as saying. 'Yeah let's make it really really big'.

In addition to these comments they also smile at child (C). This is markedly different to their interactions at the start of the activity, for there was very little eye contact between child (C) and children (A) and (B).

Interpretation-Situated Action

The *arena* for this activity is the construction area itself, as the carpet provides a clear indication of where the construction materials are to be utilised. There is evidence of the children initially exploring the

construction area without any *clear intention* of what they wanted to do with the bricks other than place them on the floor. In fact, as a practitioner, one might suggest that the task of picking up the resources and simply placing them onto the floor needed some direction. However, the task *spontaneously* develops and the goals are generated from the *moment by moment flow of activity*. Thus, from placing bricks randomly on the floor we can see the idea of building a castle evolving. Although there are fewer children than in the reception area observation, the process of gradually becoming part of a group and indeed being accepted as a member of the community, is very evident. Child (C) is initially on the periphery however, he provides some support through imitating and offering assistance when the adult becomes involved. Through observation and trial and error he is beginning to explore his role in the activity. He initially complies with child's (A) instructions, and observes children A and B, before passing some bricks to the adult. Finally he provides positive feedback to children A and B. This suggests he is now feeling more involved and is accepted by child (A) and (B). Indeed when I joined the activity 3 minutes later child (C) was very much integrated. When asked what he was doing he said *'I am checking the bricks don't fall down as the castle is getting bigger up to the sky.'*

If we apply '*Legitimate Peripheral Participation*' (Lave and Wenger, 1991) to this scenario, the watching on the part of child *C* played a crucial part in his becoming a member of the community. The role of the practitioner is important in terms of facilitating the child's (*C*) membership into the community. Indeed, child *C* was happier to initially interact with the adult first. This experience increased his confidence and thus he felt more able to interact directly with his peers later on.

Interpretation- Peer Activity

Child A and B are very established members of the group. Their exploration of the bricks is now leading them to build a castle. For them the goal is evolving. Their intention to build a castle is now clear for child *C* who is still very much on the periphery. He uses observation as a tool to examine what is going on. The children's reaction to watching themselves on video was also very revealing. Child (*A*) and (B) were very keen to point themselves out while child *C* watched and observed. I asked child *C* what he was doing and he said he was '*thinking hard. I like watching. I am good at watching. Then I know what to do.*' This showed in my view some awareness of what he was doing. For him watching was important before doing.

It is noted that child *C* makes very positive comments about the castle. This appears to ingratiate child *A* and B, as they respond back. Child *A* and B's smiling, informed child *C* that they were more aware of him and were thus inviting him to join the group. For the children this *interlude* of activity is very different to the more open situation of waiting in the reception area. The practitioner is involved, but is on the periphery. She does not intervene in terms of defining objectives, but simply facilitates the gradual involvement of child *C* into the *interlude* of building a castle.

If we apply '*Legitimate Peripheral Participation*' (Lave and Wenger, 1991) to this scenario, the watching on the part of child *C* played a crucial part to becoming a member of the community.

4.4.5b Interlude 3: Role Play

Introduction

The classroom has an area for exploring role play linked to a particular theme or area of interest. Recently, the story of 'The Three Bears' has captured the children's attention, and an area in the corner of the room has been created, with a range of props and resources to develop this

particular theme. Cloth is stapled to a frame to create a triangular roof and the sides of the house. Teddy bear costumes, bowls, cups, plates, a brush and a mirror are all placed on a table in the 'play house.'

Account 3

Three children enter the role play area which is set up as 'The Three Bears' cottage. Another child follows. They each wander into the house and pick up various pieces of the costumes such as ears, paws etc, before placing them back down onto the table. I am aware of there being no chatter amongst the children, just the exploration of the resources. The practitioner joins them and asks child A *'Who are you going to be?'* Child A glances at the practitioner, then returns to the props. The practitioner is called over to help another child in a different part of the classroom. The children in the house continue to wander and explore the kitchenware and clothing. I notice child A pick up the ears and put them on his head. Child B laughs and child C looks over. They begin to talk.

Child A: 'I'll be Daddy Bear!'

Child B: 'Yeah, Yeah, I'll be Mummy.'

Child C: Puts both arms up in the air and says 'Baby Bear!'

The children once again begin to look at the resources in the play area.

Child A: Picks up a bowl commenting, 'We need bowls for the porridge.'

Child B: 'I've got 2.'

Child A: ' We need 3.'

Child C: 'Here's one.'

Child A: 'No, that's a plate!'

Child C: 'I can't find a bowl. Use a plate.'

Child B: 'Now we need spoons – Oh there are no spoons now'.

Child A: Looks over to the writing table and collects some pencils and says` These can be spoons – Look!' and models how they can be used to eat.

Child C: 'OK.'

At this point, a fourth child (D) is observing the activity from the edge of the play-house. She does not enter the house, but is clearly watching what is going on and smiles as she notices baby bear drinking from the bottle. A practitioner joins her.

Practitioner: 'There is room for you – Do you want to join them? She holds out her hand.'

Child D: Shakes her head and hides her hand behind her back.

The practitioner moves away. Child D continues to observe the group. She takes several steps towards the house and stops. These actions are repeated until she is in the house. On entering, she picks up a brush, looks into the mirror and brushes her hair.

Child A clearly states: 'You can't join in.'

Child B moves forward: 'Yes she can. We can have 4 -Look!' She begins to count 1-4'. (1 pointing to child A, 2 pointing to child B etc.)

Child B points to Child D: 'You can be Goldilocks'

Child A nods and returns to eating his porridge. Child D smiles and begins to imitate baby bear, pretending to drink from a bottle. However, this does not last long and she returns to the mirror to continue brushing her hair. She finally picks up a bowl of porridge and pretends to taste it.

Interpretation-Situated Action

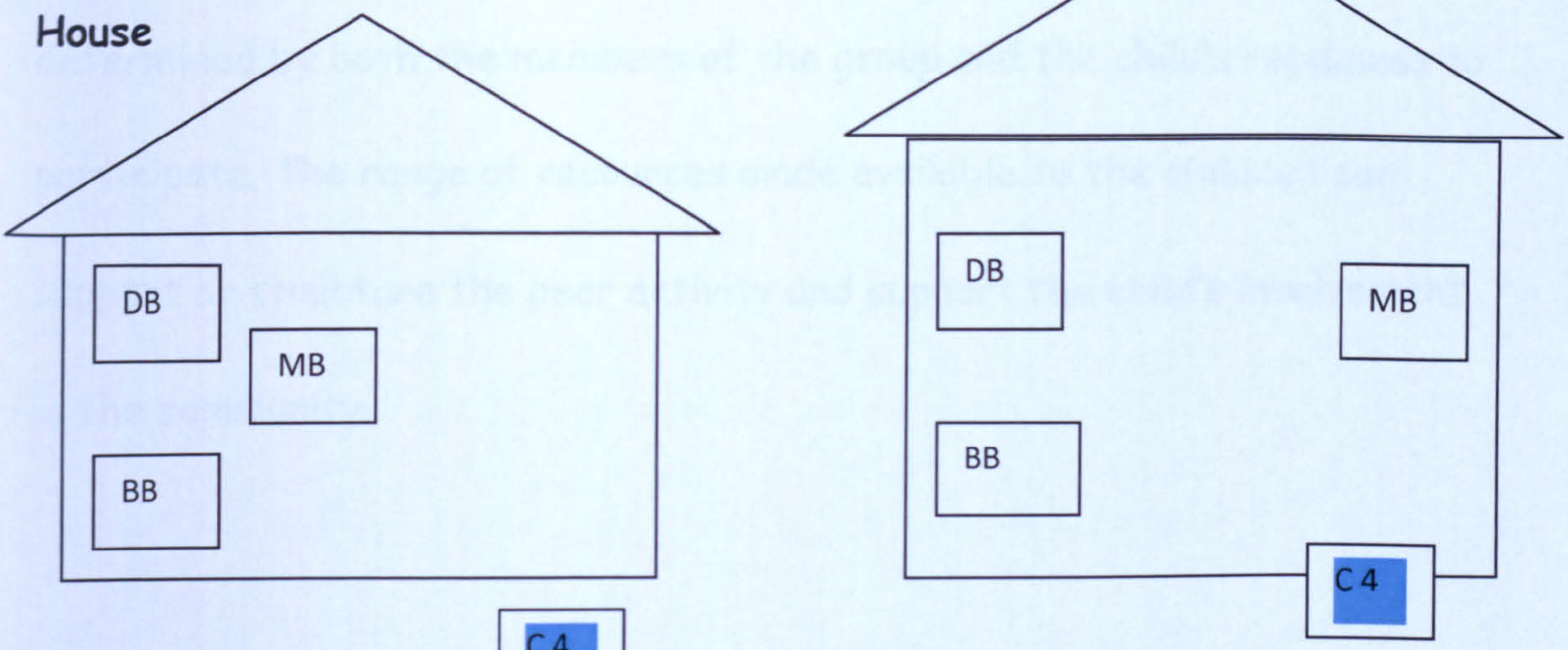
In this interlude of activity, the role play area defined within the structure of a small play-house, provides the '*arend* from which to observe the *'person in setting relationship.'* The children individually explore the resources. At this stage one is not aware of what roles they will adopt or

even if they will remain in the play-house for any length of time. Even the added comments from the practitioner do not produce an immediate response. The development of roles gradually evolves as the children require some initial exploration. When faced with a lack of resources, we can see the children spontaneously looking to resolve this problem.

What is also interesting here is how child D is very clear on when she wishes to join the group. She is clearly not ready when the adult asks her to participate. She continues to observe before gradually moving into the play-house. At first she plays alongside the others, brushing her hair. Once accepted into the group she engages in parallel play and imitates 'baby bear', but then chooses to return to brushing her hair. This can perhaps be interpreted as her attempting to become more involved in the group and considering what she was expected to do. I asked her when I joined the group, why she liked brushing her hair. She said '*That Goldilocks do'.* I feel this statement suggests that while observing the group she was determining what role she would undertake and what actions she would perform. From not being part of the group, in terms of playing a character, to finally taking on the role of Goldilocks, she very clearly took control as

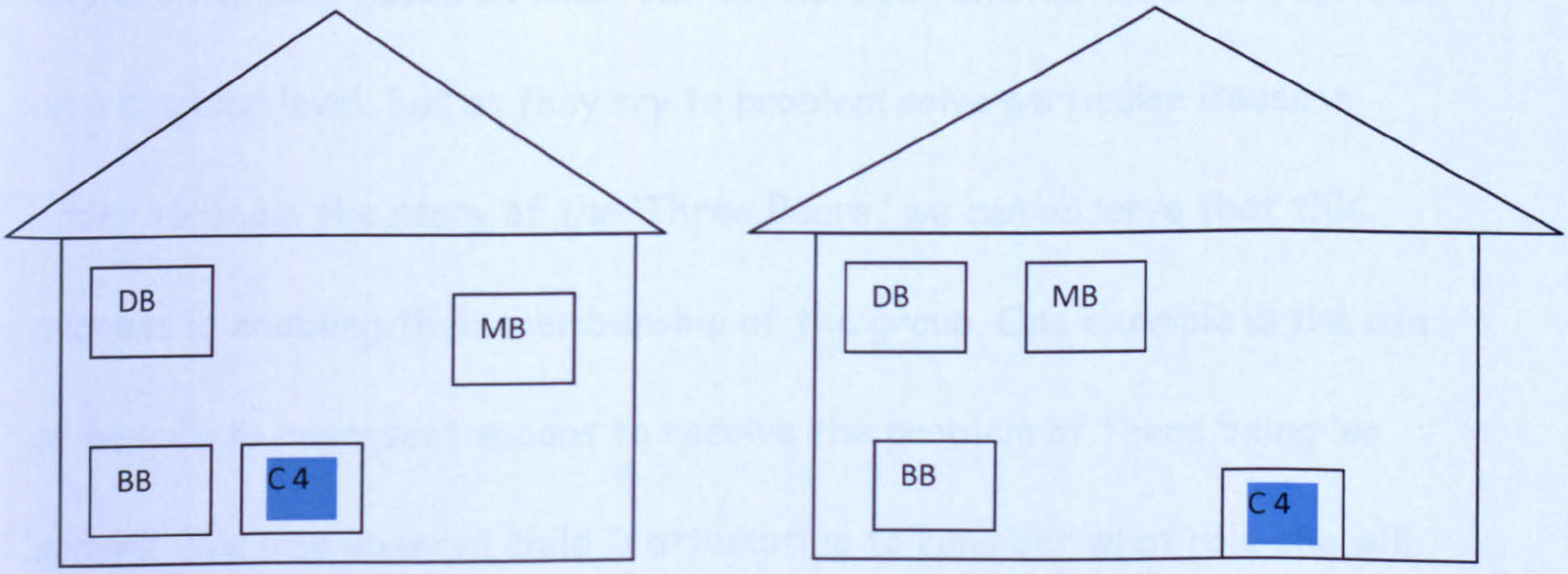
to when and how she was to become a member of the group. This change in activity can be represented through the following diagram. (Fig 19)

Fig 19: Role Play (DB =Daddy Bear, MB= Mummy Bear, BB=baby bear, C4= child 4)



1. Child 4 observes the activity.

2. Child 4 enters and brushes her hair at the edge of the house.



3. Child 4 joins baby bear and pretends to drink from a bottle.

4. Child 4 returns to brushing her hair.

Having observed child (D) on the edge of the play house, the practitioner encourages her to enter the house. She initially refuses to follow the adult's lead; however she eventually overcomes this reluctance and finally joins the group. In my view, entrance into the community is very much determined by both the members of the group and the child's readiness to participate. The range of resources made available to the children can support or structure the peer activity and support the child's involvement in the community.

Interpretation-Peer Activity

The children again do not immediately interact with one another. They explore the play-house on their own terms. Each one has entered the house on a singular level, but as they try to problem solve particular issues in order to begin the story of the 'Three Bears,' we can observe that this process is enabling their membership of the group. One example is the use of pencils to represent spoons to resolve the problem of there being '*no spoons.*' We also observe child D attempting to consider what role she will take. She initially demonstrates using a brush as if to indicate that she is pondering with the idea of adopting the persona of Goldilocks. This is clearly taken up by child B who states that she can play this role. We see

the development of the group evolving. Once again imitation is very evident within the context of situated action. For child D it demonstrated to the other children that she was very aware of what was required when wishing to undertake a particular role in the scenario of the 'Three Bears'. She imitates the actions of child C and thus drinks from the baby bottle. One could argue that through imitation child D is attempting to ingratiate herself to the other children in order to join group. She is aware that she must perform particular actions if she wants to participate. The children's response to child D is very much centred on the issue of her membership of the community. It is this that focuses their attention upon her.

4.4.6 Summary

Situated Action

Through situated action, one can observe as it unfolds, the interplay between the child and the environment. This development is in strong contrast to the previous studies and so we can begin to more fully understand how the reality of *free association* impacts upon peer phenomena. The children respond spontaneously with their surroundings as they interact with one another. Plans evolve as the activity develops. There are vague intentions as to what the children will do, but these change and

develop as the activity progresses. It is because of this lack of clear goals that the pace of activity is slower than that observed in the previous two studies.

Lave and Wenger's (1991) notion of *'Legitimate Peripheral Participation'* is clearly evident in the activities observed. We can conclude that there are different levels within a community of peers in an early years educational setting. Indeed, in all the examples the children are members of the Children's Centre community by the very fact that they attend the setting. Moreover, there is evidence that sub communities exist as children form smaller groups to engage in different activities. In the example of the role play, one could argue that the child on the edge of the activity was indeed moving from one community, namely the nursery class to one of its sub-communities that of the role play activity.

Peer Activity

In my view it is the spontaneity, vague intentions and desire to become a member of the group which shapes the peer activity. We can observe the children engaging in more isolated activity as they explore the resources.

However, as the task evolves, they become more aware of one another. Imitation is utilised to indicate awareness of what is required to become part of the group. This provides the opportunity for the child to explore the activity and demonstrate to the group that they could follow the rules.

One can observe the children attempting to resolve any problems they encounter, their motivation being the ultimate desire to reaffirm, acknowledge and maintain their membership of the group. *'Legitimate Peripheral Participation'* allows one to examine how a child can move from peripheral involvement to more central participation. I would argue that this desire to become a *member of the community* is very strong and has a profound impact upon the peer activity.

In each example, observation was the first tool the children use to assess the community and gain an understanding of the rules of the games or the roles they can undertake. Imitation was another key element important for allowing membership of the group, thus providing the opportunity for the child to explore the activity and demonstrate to the group that they could follow its rules. Acceptance into the group came from the other children in both non verbal and verbal forms such as smiles, eye contact and welcoming comments about or towards the child.

Study 4 thus provides a very different perspective on peer interaction as it emerges out of an interlude of spontaneous activity. When combined with the previous studies we now have a more complex picture of peer dynamics as it typically occurs in the Children's Centre.

CHAPTER 5: Discussion

5.1 Introduction

Having explored the four studies in terms of peer activity in varying contexts, this chapter will now draw together the key themes and thereby begin to consider the implications of the research findings for early years practitioners. The rationale underpinning this research project centres on the notion of '*reflexive co-construction*' through '*sustained shared thinking*'. (Siraj-Blatchford, 2002, p10) and *sustained shared activity*. These terms will be used at appropriate stages throughout this chapter in order to develop frameworks from which one can examine '*reflexive co-construction*' through peer activity. I have argued that in order to support practitioners in their understanding of *'reflexive co-construction'*, an appreciation of peer dynamics is required. To achieve this, I have explored peer dynamics through four everyday realities by utilising a range of contextual frameworks. The thesis has been organised into four separate studies where each one reflects the close relationship between peer activity and context.

In Study 1, I have applied Bronfenbrenner's (1977, 1994, 2nd edn, 2005) Bio- ecological model to examine the opportunities for peer activity

through the reality of the Children's Centre's organisational structure, thus allowing one to consider the broad early years context in which peer activity is located. Having explicated the opportunity for peer activity within the Children's Centre in general terms, I have then considered the remaining three realities aided by Nardi's (1996) exploration of distributed cognition, activity theory and situated action. Thus, Study 2 analysed peer dynamics through the reality of *formal shared events* by utilising the notion of distributed cognition, while Study 3 examined peer activity through *episodes of structured mediated activity* by applying Engstrom's interpretation of activity theory, as cited in Cole (1996, p40). Finally, Study 4 illuminates peer activity during *interludes of free association* by applying the notion of situated action. This discussion now continues under the following headings:

5.2 Practitioner Ethnography

5.3 Summary of the four objectives

5.4 Explication of the notion of '*reflexive co-constructions*'

5.5 Engaging with Colleagues

5.6 Developing Training and Advanced Practitioner Workshops

5.7 Implications for future Early Years Research

5.8 Conclusion

5.2 Practitioner Ethnography

In Chapter 3, under the heading of Practitioner Ethnography, I illustrated how the use of ethnography enabled the identification of particular features, which were then applied to develop an appropriate methodology for researching peer activity. I have used my position as a practitioner and consultant to reveal the many features of the Children's Centre which facilitate and shape peer activity. In order to assist the exploration of peer activity, I have utilised in very specific ways four contextual frameworks as a means to examine peer activity from the perspective of the participants themselves. This may seem rather unusual, but in my view is completely justified, if one is to explicate peer dynamics from a contextual standpoint. However, I am very aware that such an approach has strengths and limitations in its design.

Firstly, utilising practitioner ethnography in the ways identified above has undoubtedly allowed for the relationship between peer dynamics and

context to be revealed in a way that goes beyond the notion of context as defined by the physical layout and resourcing of a room.

Secondly, although the study introduced the '*interviewing on the move*' (Clark, 2004, p145) technique to provide the children a 'voice', it was not utilised appropriately. Watching recorded material, although very useful, was limited to short periods due to the demands of the day. I feel the observational diary discussed in Chapter 3 needed to build this into the session more carefully. It was perhaps too ambitious for a small scale research project like this one.

Thirdly, the methodology lacked the 'parents voice' as another perspective and dimension for exploring peer activity. If I am claiming that this study presents an image of the child in their natural setting, then parents are a key feature of this natural learning environment. Indeed, in Study 4, the parent's view on the *interlude of waiting* (pp229-237) in the reception area was not sought and yet could have provided another perspective on what had occurred. Parents' involvement was not incorporated at this stage as it was considered that it would have created several methodological challenges, most notably the issue of time. In the future this should be

reviewed more critically, particularly as the EYFS (2007) quite rightly describes *'parents as the children's first and most enduring educators'* (EYFS, 2007 *xi).

The Four Contextual Frameworks

Undoubtedly, the utilisation of four very diverse frameworks in order to reveal peer dynamics provided a structure from which to examine peer dynamics from the broad dimension of ecology to the more specific entities explicated through distributed cognition, activity theory and situated action. However, I was very aware of the limitations each one presented and it was particularly challenging to define how best to use the varying contextual frameworks. Using four notions of context to operationalise the four realities identified in Chapter 1 was time consuming, in terms of ensuring each one was applied appropriately to selected documentation and observational data. There was a danger that a somewhat segmented thesis would emerge which lacked coherence.

In order to address this concern, it is now my intention to begin to draw

* (xi) *'Positive Relationships - Parents as Partners' Card 2.2 in the Early Years Foundation Stage (2007)*

these four studies together and thereby provide an enhanced understanding of peer activity. From this analysis, it will then be possible to begin to explore the opportunities for *'reflexive co-construction'* amongst peers themselves.

5.3 Summary of the Four Objectives

What follows is a summary of each of the four objectives underpinning the relevant study as identified in Chapter 4.

Objective 1: *Utilise Bronfenbrenner's Bioecological Model of Human Development to help clarify the broad early years context within which peer activities can be located, studied and more fully understood.*

Perhaps the most defining feature of Study 1 in terms of exploring peer dynamics is the identification of the four microsystems within the Children's Centre which the children inhabit on a regular basis, namely the reception area, hall, corridor and nursery classroom. By examining each of these microsystems from the perspective of Proposition 1 and 2, (Bronfenbrenner, 1994, 2nd edn, p38) as discussed in Chapter 2, it has revealed just how varied the peer dynamics can be when one considers the different sets of proximal processes. It is the function of each

microsystem which shapes the elements of *'form, power, content and direction'* (Bronfenbrenner, 1994, 2nd edn, p38) and in so doing presents varying realities or contexts in which peer interaction occurs. For example, the reception area, by its very purpose, provides children with the opportunity to wait and prepare for the transition from the parent/child relationship to the practitioner/learner relationship. Thus, children have the opportunity to associate with one another in a generally free, open manner. As the practitioner is not present within this microsystem until it is time for the nursery day to begin, formal shared *events* led by the practitioner themselves are not a key feature of this microsystem. However, when one enters the corridor, the children encounter the reality of formal shared *events* as they are organised together to move as one group from one area of the building to another. Conversely, peer dynamics alter again as they experience the reality of structured activity as the children enter the nursery classroom, which by its very nature facilitates such activity.

Our understanding, however, of the broad early years context in which peer activity is located can be more fully understood when we utilise the model to draw our attention to the next level of ecology. Indeed, through

the mesosystem one can note the impact of such features as the domestic order, pedagogical requirements, personal needs and health/safety considerations, which create varying networks which link the microsystems together. As one moves from one microsytem to another, we see differing proximal processes emerge.

Conversely, how children are managed and planned for through the exosystem creates varying opportunities for children to engage with one another. For example, curriculum planning defines the types of activities children encounter in the microsystems, such as shared formal *events* when listening to a story in a small group, engaging with one another in *episodes* of structured activities or experiencing *interludes* of free association when children engage with one another in an unstructured manner.

Ultimately, the shaping of such activity identified within the exosystem and the overall functioning of the Centre is defined by government policy, as examined through the macrosystem. This layer indirectly impacts upon the differing levels of association, for it is here that early years pedagogy is formulated. Children therefore have the opportunity to experience early years education in a structure that integrates both the educational

elements and personal care of children. Thus we see the opportunities for sharing a meal, and developing independence, being as important as practitioner directed activities.

The utilisation of Bronfenbrenner's model has revealed how the reality of the Children's Centre's organisational structure creates many varying opportunities for children to engage with one another as they experience their early years education. I propose that peer dynamics is a key feature of current educational practices both at micro and macro levels. As a practitioner, it is important to understand how peer activity is both directly and indirectly influenced by context. Research into peer dynamics in my view needs to be more closely linked to current everyday realities. Study 1 has illustrated peer activity and context at a general level. However, to begin to critically examine peer activity through the reality of formal shared *events, episodes* of structured mediated activity and *interludes* of free association, further examination of these is required through the corresponding contextual framework, as identified in the following objectives.

Objective 2: *Explore and describe some patterns of peer dynamics observed within a set of daily realities, utilising the conceptual framework of distributed cognition as found in cognitive science.*

When exploring the reality of formal shared *events*, distributed cognition allows one to consider how the context of a coordinated system impacts upon the emerging peer dynamics. To appreciate this more fully it is important to, firstly, examine the purpose of these systems and, secondly, explicate how they shape the patterns of peer activity observed.

It has been revealed that the children in the nursery experience varying coordinated *events*. The utilisation of a system allows the practitioner to monitor children's progress, communicate ideas and thereby assist in the internalisation of knowledge. For example, the *event of registration* indicates the start of the day, while the *event of eating a snack* communicates to the children that the session is half way through. Specific concepts can be explored and children's ideas are shared through the skill of the practitioner as they model, prompt and repeat information. This can initiate the opportunity for the children to share and communicate their ideas.

As children are drawn together in small or larger groups in varying shared coordinated *events, this* also informs the children that they belong to a group. It formally affirms their status as a member of the nursery community through the functioning of the system. This is somewhat different from the more informal exploration of membership of a community as revealed through the contextual framework of situated action.

Equally, when children are placed in a coordinated system, it can provide a formal break from the more intense activity observed in *episodes* of mediated activity through the contextual framework of activity theory. In these situations, the children are engaged in tasks which by their very nature are full of activity. The children are focused and challenging one another to achieve their shared outcome. At times this can be intense and on some occasions an adult is sought out to support the activity, particularly when children become frustrated with one another. As a practitioner, I am aware that there can be a need for a quieter, more focused, activity very much led by the adult, and thereby partially removing the focus from the children themselves. I would argue that coordinated *events* provide the structure for managing a group of children.

It is the functioning of a coordinated system, which is important to understanding peer dynamics. The practitioner is, as one would expect, crucial for maintaining the functioning of the system. Although there was evidence of the children *aligning* themselves to both the practitioner and one another it could at times be a very 'messy process.' Children were easily distracted, and needed reminders as to what they were going to do. By modelling, repeating key words, encouraging the interchange of ideas from the children themselves, and using visual prompts to focus the children's attention, the practitioner is able to maintain the activity as a means to achieving the goal. Although the practitioner is often the main focus, the children also observe and imitate each other. They model ideas for one another by demonstrating particular actions. In terms of motivation, this can be interpreted as the child reaffirming their role in the system, demonstrating and communicating to one another that they are aware of what is required to maintain the functioning of that system. There is a need for the children to ingratiate themselves with one another and the practitioner, as this will ultimately ensure their role in the activity. This desire to ingratiate and maintain their presence within the coordinated *event* results in some children being very competitive with one another. It is the use of these varying strategies to sustain the system, closely linked with the notion of motivation, which moulds the emerging peer dynamics.

Thus, by analysing the findings from objective 2, one can deduce that the utilisation of shared coordinated *events* by practitioners has specific purposes. The functioning of the coordinated system is maintained through a range of strategies, which, in turn, impact upon how the children interact not only with the practitioner, but more importantly, with one another. Motivation can be explored from the notion that children seek to ingratiate themselves with one another as a means to maintaining their role within the system structuring the shared event. A system formulates one context in which children create '*reflexive co-constructions*' not only with the practitioner, but with one another.

Objective 3: *Explore and describe some patterns of peer dynamics observed within a set of daily realities, utilising the conceptual framework of cultural mediation as found in activity theory.*

The reality of structured activity is perhaps more familiar to practitioners, as their role centres on the need for careful preparation with the intention of developing particular ideas. The practitioners on a daily basis, consider the role of language, signs and symbols, in order to communicate meaning, the deployment of staff to support the activity and, finally, the availability of resources, as being important for developing an activity.

The framework of activity theory exhibits a greater range of activity in terms of peer interaction in contrast to the peer dynamics revealed in Study 2. To understand this more fully, it is important to consider the impact of mediation and focused learning intentions on an activity and how this in turn influences the emerging peer dynamics.

Several *episodes* of structured mediated learning illustrated how the application of mediatory devices impacted upon the subjects' interaction with the object. We see the contrast between directed and mediated activity. The former may lack progress until they utilise a mediatory device. Although the children have a clear goal in terms of outcome, in some *episodes* of activity it is not until we see the introduction of mediation that the goal becomes more defined. The pace of the activity intensifies. The rules of the activity may change and the division of labour is more clearly visible in terms of the roles undertaken by the children themselves.

As mediatory devices are introduced, one observes varying patterns of peer dynamics. Children observe, imitate, and follow one another. They model, demonstrate ideas, guide, negotiate and comment on one another's actions. Children also ingratiate themselves with one another and there is

evidence of collaboration as the children cooperate in the utilisation of the mediatory devices. Conversely, one notices competition over which devices will be introduced, and by whom, resulting in possible frustration, which can only be resolved via the mediation from the practitioner. To expound this further, it is necessary to examine motivation by referring to Tomasello's (2000) notion of children viewing one another as *'mental agents'* (2000, p179). The child, through the development of social cognition, now begins to consider the other child as a resource for their own outcomes. The children need one another to stimulate ideas through social interaction. Thus, when children are given the opportunity to engage in structured activity, be it child or adult initiated, there is a desire to engage, collaborate and co-operate with one another. Indeed, Fisher (2008) argues that,

> *'young children naturally collaborate and cooperate when they see the need to do so particularly when they are engaged in self initiated activities'* (2008, p117).

To achieve such collaboration, children use varying strategies such as imitation, modelling, commentary and demonstration etc. Of course, as a practitioner, I am very aware that such collaborative behaviour does not simply happen in one smooth action. It can be challenging to encourage

children to cooperate with one another as they enter the situation with varying individual skills and abilities.

By exploring peer activity from the notion of mediation as examined through activity theory, I propose that mediation as a notion to understand context can shape the outcome and intensity of the activity. The introduction of mediatory devices presents the children with a number of options and in order to use them successfully they need to interact and co-operate with one another. This results in varying patterns of peer dynamics. It is through mediation that we see the opportunity for '*reflexive co-construction*'.

Objective 4: *Explore and describe some patterns of peer dynamics observed within a set of daily realities, utilising the conceptual framework of situated action as found within cognitive science.*

To have had the opportunity to examine *interludes* of free association of a semi-informal nature amongst peers through the contextual framework of situated action has been most revealing. From the perspective of the practitioner, it may be one of the least understood realities. There is

undoubtedly a natural need on the part of the practitioner to direct children through a carefully planned curriculum. I would argue that when children engage in *interludes* of free association, practitioners perceive this as a cue to support the children in an activity, as they appear to be unsure of what to do. To more fully understand peer dynamics within this contextual framework, it is important to consider the function of free association from the perspective of the child.

The Children's Centre presented varying opportunities for the children to generally freely associate with one another. Of course, this was set within the confines of appropriate health and safety regulations for children of such a young age. I observed, on many occasions children seeking the opportunity to observe and assess a situation, by simply exploring their surroundings without any clear defined intentions. Such activity was a very noticeable part of the daily routine. Its purpose was twofold. Firstly, it provided a period of time away from the more formal activity experienced through shared coordinated *events* and, on some occasions, a rest from the more intense activity experienced during *episodes* of structured mediated activity. After participating in a shared *event*, some children required time to spontaneously explore their surroundings and its resources on an

individual level. There were no clear plans, which contrasted sharply with *episodes* of mediated and goal driven activity examined through the notion of activity theory. Secondly, the opportunity to engage in *interludes* of free association allowed the child to transfer from an individual activity to become a member of a group. The gradual introduction to, and finally, the inclusion into an activity, leads to more intense group activity, as observed through activity theory.

When children have the opportunity to engage in *interludes* of spontaneous, '*moment by moment interactions*' (Nardi, 1996, p71), this undoubtedly impacts upon the peer dynamics. Once again, observation, imitation, repetition and modelling of ideas are utilised by the children to engage with their environment and to seek one another out. When examined from the notion of motivation, I believe that, once again, ingratiation features strongly as a driving force behind peer activity. In all three *interludes* explored in Study 4, one observed children utilising imitation and the repetition of specific action as a means to inform the group that they were aware of what is expected if they were to become members. In turn, the members of the group observed the activity of the individual, and responded with either positive comments, which acknowledged their

potential membership or negative comments suggesting that they refused the child's participation in the activity. We see the gradual movement of a child from the periphery of the group to becoming more involved and, thus, the peer activity alters. The child who is seeking membership and acceptance from the group tentatively models his/her own ideas. This is particularly noticeable when observing child D in the Role Play scenario (see pp242-249) who, having once imitated the actions of child C as 'baby bear' when on the periphery of the group, now presents her own ideas on how she can take on the role of 'Goldilocks' as she gains membership.

Thus, I propose that when children are engaged in *interludes* of free associations there are several key points which are significant when exploring peer dynamics. *Interludes* of free association are important as they serve to allow children to explore their own ideas without any set agenda, as objectives evolve from this activity as opposed to directing it. They provide a pause, or a moment, to rest from an intense activity and to re- evaluate ideas before returning to the group. Equally, *interludes* of free association allow the child to gradually seek membership into a group activity, which is shaped not only by the child but also by the group itself in terms of their willingness to accept the 'newcomer' to the group. I propose

once again that the need to ingratiate is driving the peer dynamics at that moment, in order to not only seek membership but to engage with peers in a non goal-orientated manner. To understand '*reflexive co-construction*' in this context, it is important that the practitioner acknowledges that children may have only very vague intentions in terms of activity.

'Weaving together' (Cole, 1996, p135)

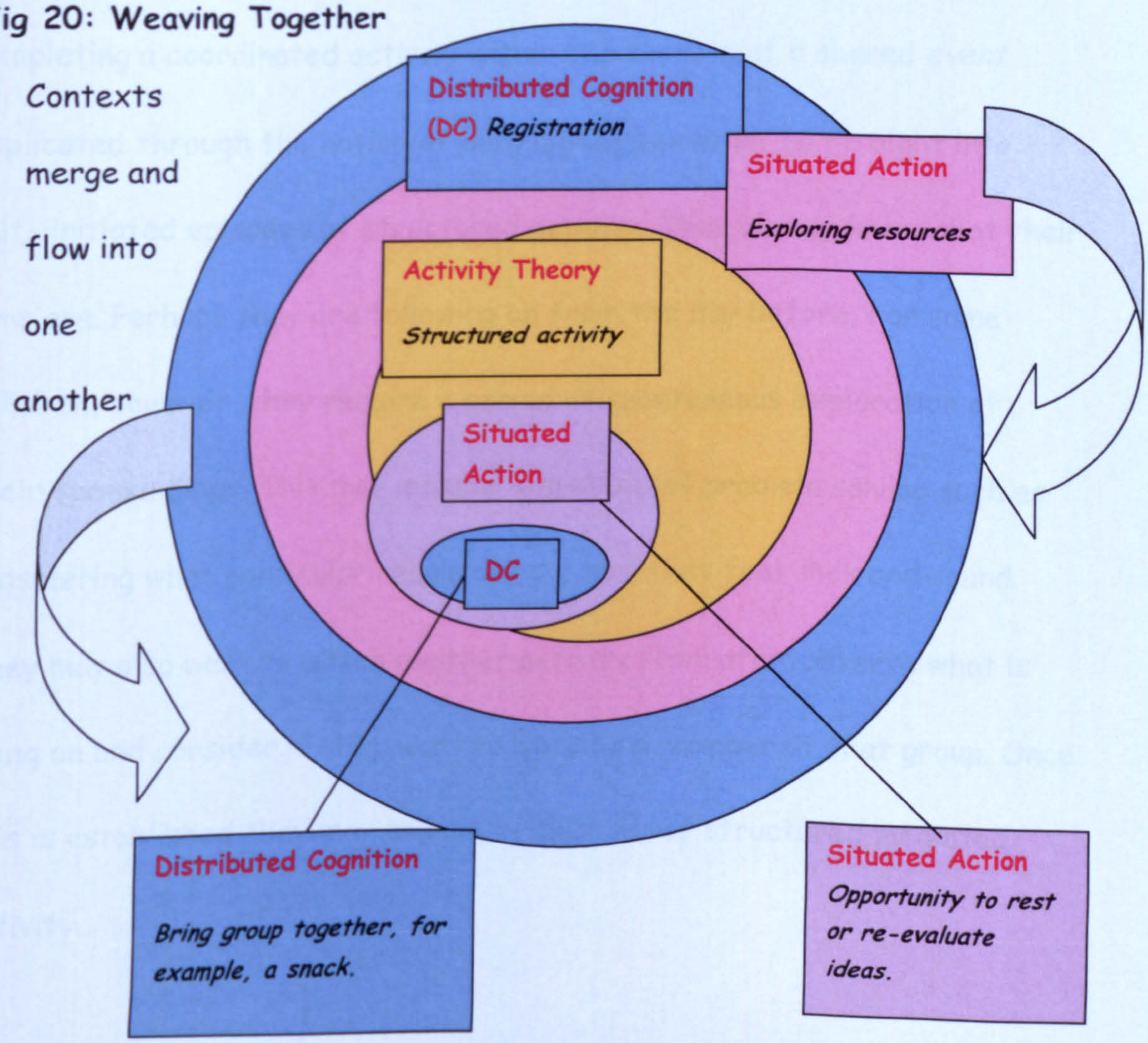
Although each reality, through the application of differing contextual frameworks, has been explored on a singular level, it is very difficult to discuss one in isolation. As I have attempted to examine each objective, it has been impossible not to refer to the other realities. In light of this, I refer back to Cole's (1996) use of the term '*contexere*' - to *'weave together'* (1996, p135). It is at this point that I wish to propose that the four realities do not work in isolation but are linked together as part of the daily routine. Of course, if we refer back to the identification of the microsystems in Study 1, this is not surprising as the microsystems, through the mesosystem, link with one another. We can observe the reality of *interludes* of free association, examined through situated action in the reception area, moving onto more formal shared *events*, as children are

collected and organised into a system, in order to move in an orderly way along the corridor.

However, when we analyse the varying realities in one microsystem, i.e. the nursery classroom, it is possible to observe the interaction and *'weaving together'* (Cole, 1996, p135) of these realities. As the children enter the room, they are directed by the adult to engage in the shared *event* of registration, as revealed by distributed cognition. From here they may be introduced to a range of structured activities and resources. The children are then given the opportunity to spontaneously explore these resources through *interludes* of activity where no clear objective is identified. They may watch one another as they begin to share ideas, as examined by situated action. As the activity intensifies, the goal for the activity, which is either adult or child-initiated becomes more apparent. Through activity theory, one notes *episodes* of structured mediated activity as the children take on different roles to achieve the objective and, thus, reach the desired outcome. There may be a lull in these *episodes* of intensity and some children may tire and move away. Perhaps this is to explore other resources through *interludes* of spontaneous problem solving. The goal, once again, may not be clearly defined. Here we move into the context of

situated action. The adult, in order to manage the group, or to take into account the domestic needs of the children, such as the requirement for refreshment, will organise the children into a shared co-ordinated *event*. This can be represented as the following: (Fig 20 Weaving Together)

Fig 20: Weaving Together



Although the above circles illustrate the potential flow between these contexts, I would also argue that this pattern will vary throughout the day through the influence of the mesosystem. The routines of the day defined

by the various layers of the ecological framework, structure the sequence of contexts.

However, the children themselves also determine the sequence of contexts according to their own individual needs. For example, some children, when completing a coordinated activity within the context of a shared *event* explicated through the notion of distributed cognition, go straight into self- initiated episodes of structured activity. They clearly know what their aims are. Perhaps they are following on from the day before. For some children, however, they require a period of spontaneous exploration of their surroundings. This may include *interludes* of problem solving such as considering what particular resources do; how they feel, look and sound. They may also want to watch another activity from afar, observe what is going on and consider if they want to become a member of that group. Once this is established they may engage in *episodes* of structured mediated activity.

Conversely, for those children already engaged in structured child-initiated activity, their actions may be defined by the need to pause, move away and revisit resources through *interludes* of spontaneous exploration as they

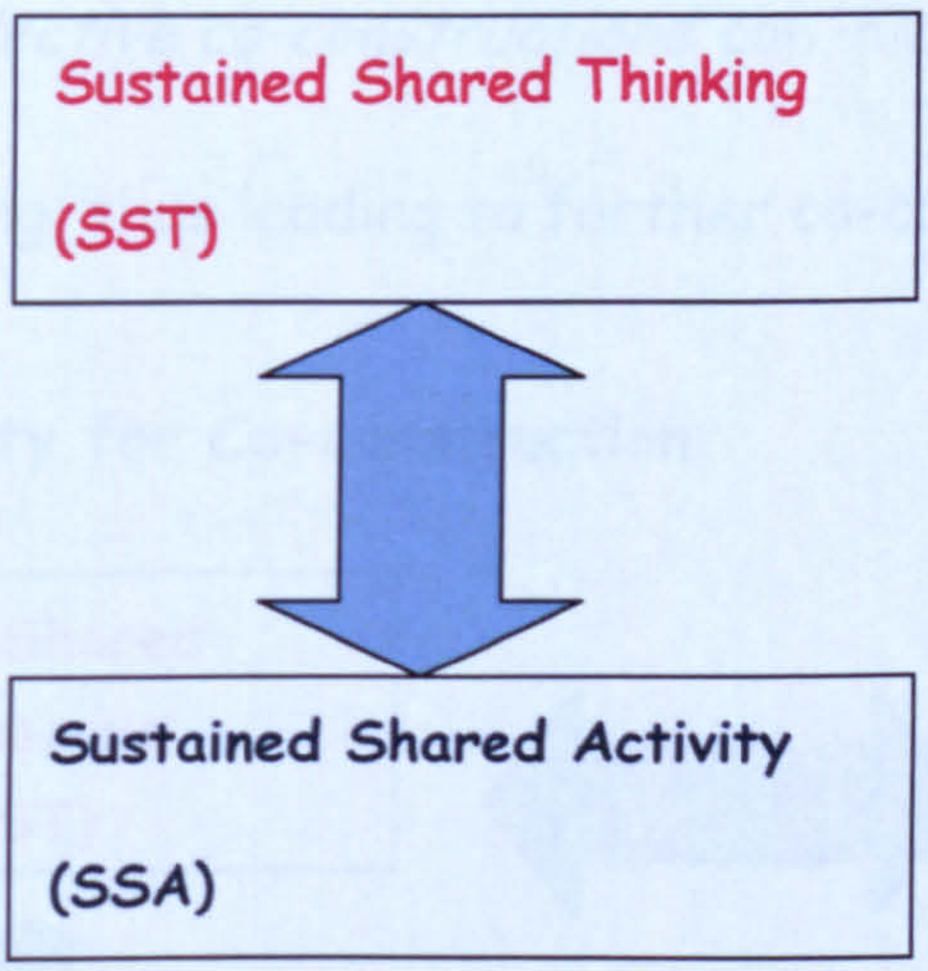
problem solve. When observing such activity one may assume that the children are disinterested, and yet the need to explore away from one another and then come back as a group is important to sustain the activity. One may argue that in this scenario, the contexts of shared coordinated *events, episodes* of structured mediated activity and *interludes* of spontaneous activity are closely linked and, to some extent, are working in parallel with one another. But what is particularly interesting about *weaving* the realities together is that we begin to note the opportunities for *'reflexive co-construction'.*

5.4 Explication of the notion *'Reflexive Co-Construction'*

In light of the findings raised from Studies 2-4, some interesting deductions can be formulated regarding understanding *'reflexive co-construction'* (Siraj-Blatchford, 2002, p10) in a holistic manner. Rather than view it in isolation, it is more appropriate to consider *'reflexive co-construction'* within the realities children encounter on a daily basis. Studies 2-4 illustrate how children engage with one another at varying times and in different ways. One can consider children's shared thinking as crystallisations of some of their experiences which can be shared in a way that is appropriate for that age group. However, to consider this in

isolation rather than taking account of the activities out of which these experiences evolve would be misrepresentation of what is actually occurring and would not support the early years practitioner working with young children. I propose that in addition to '*sustained shared thinking*', the child, be it with the practitioner or their peers, also engages in *sustained shared activity*. Indeed, the former *sustained shared thinking* emerges out of the latter. In turn, the sustained shared activity gives rise to further '*reflexive co-constructions*'. This can be represented in the following diagram (Fig 21).

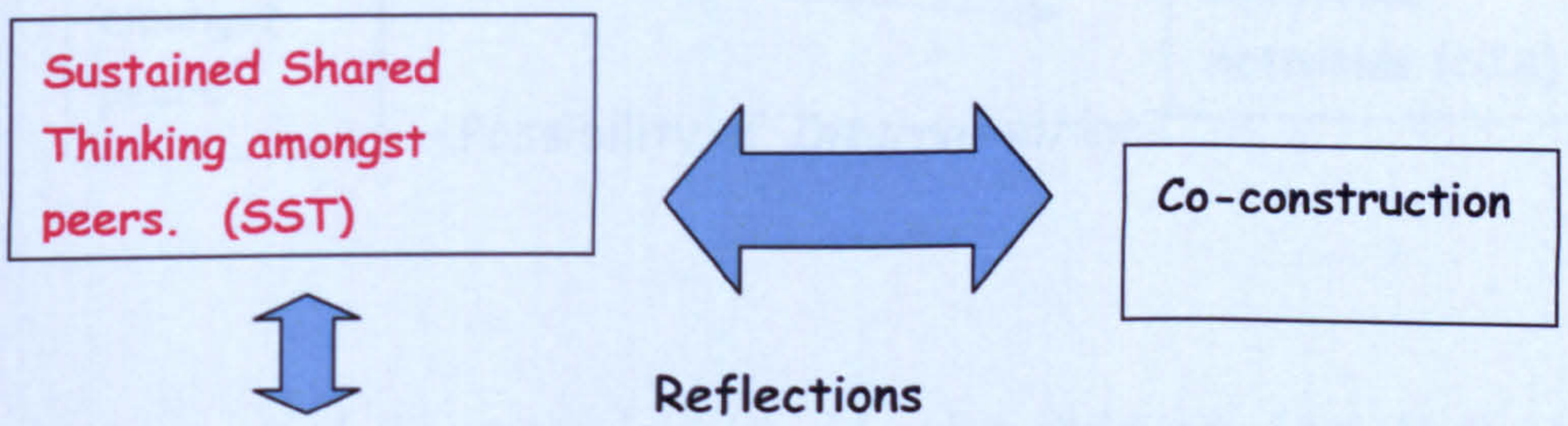
Fig 21: Sustained Shared Thinking and Sustained Shared Activity



If we refer back to the examples of peer activity in Studies 2-4 we can indeed see evidence of *sustained shared thinking* emerging from *sustained*

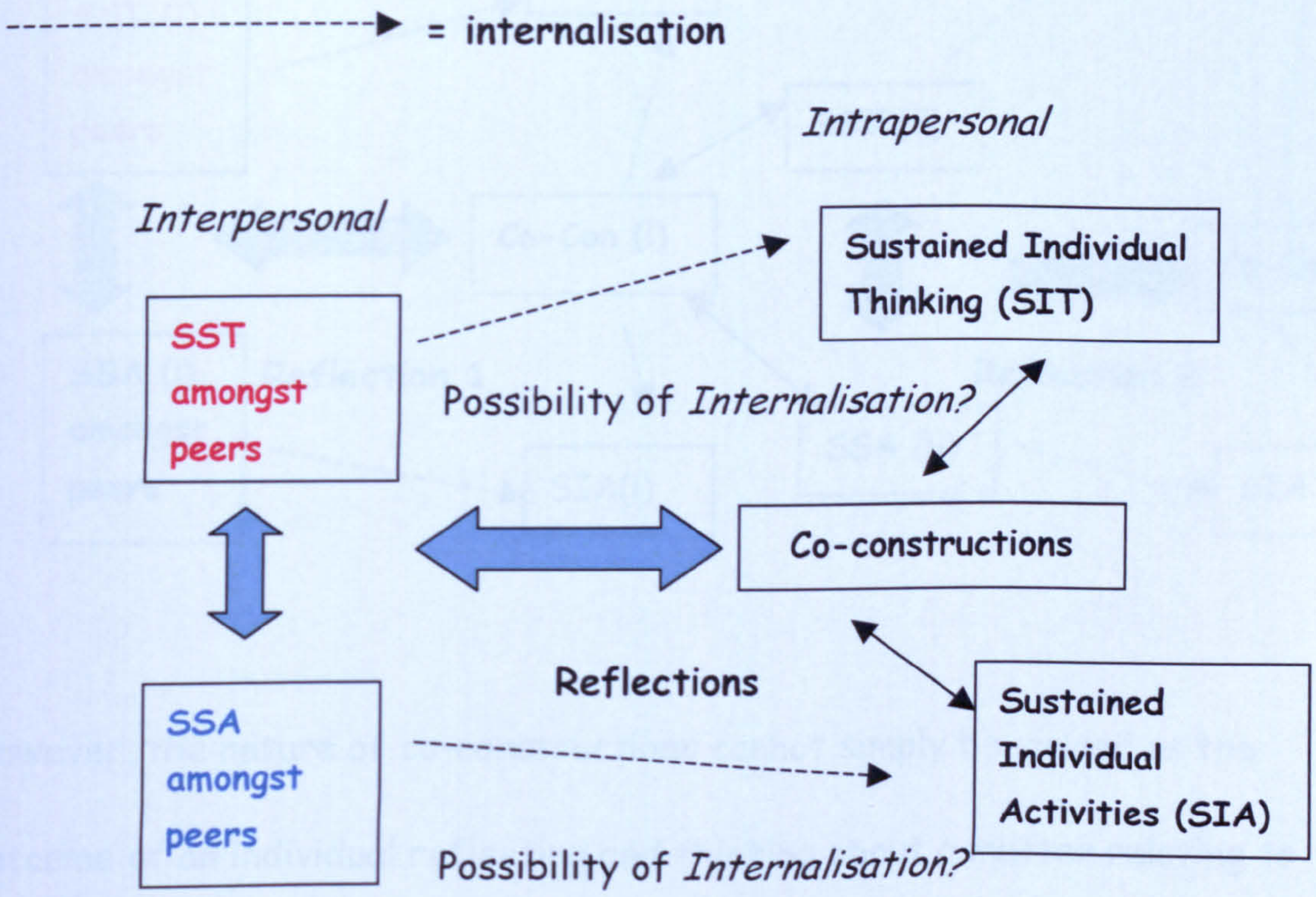
shared activity. For example, children explored their likes and dislikes with regard to fruit through the *event* of sharing a snack with one another, while in *episodes* of mediated activity we note children discussing mediatory devices as they explore the activity of 'going to work' through role play, and during *interludes* of free association children explored the development of the retelling of the story of 'The Three Bears.' The interaction between the shared activity and the shared thinking begins to give rise to shared reflection which could be described using Siraj-Blatchford's (2002) terminology as *co-construction*. This can be illustrated as the following (Fig 22), which extends the representation of '*reflexive co-constructions*' as described in Chapter 1 p9. The arrows are bi-directional as *'reflective co-constructions'* can initiate further sustained activity and thinking, thus leading to further co-construction.

Fig 22: Opportunity for Co-construction



By applying Vygotskian (1978) theory, that knowledge can be explored firstly at the interpersonal level and, secondly, via internalisation at the intrapersonal level, one can begin to understand what is occurring from a socio cultural perspective. This can be explored through the following diagram. (Fig 23 Vygotsky and Co-construction 1)

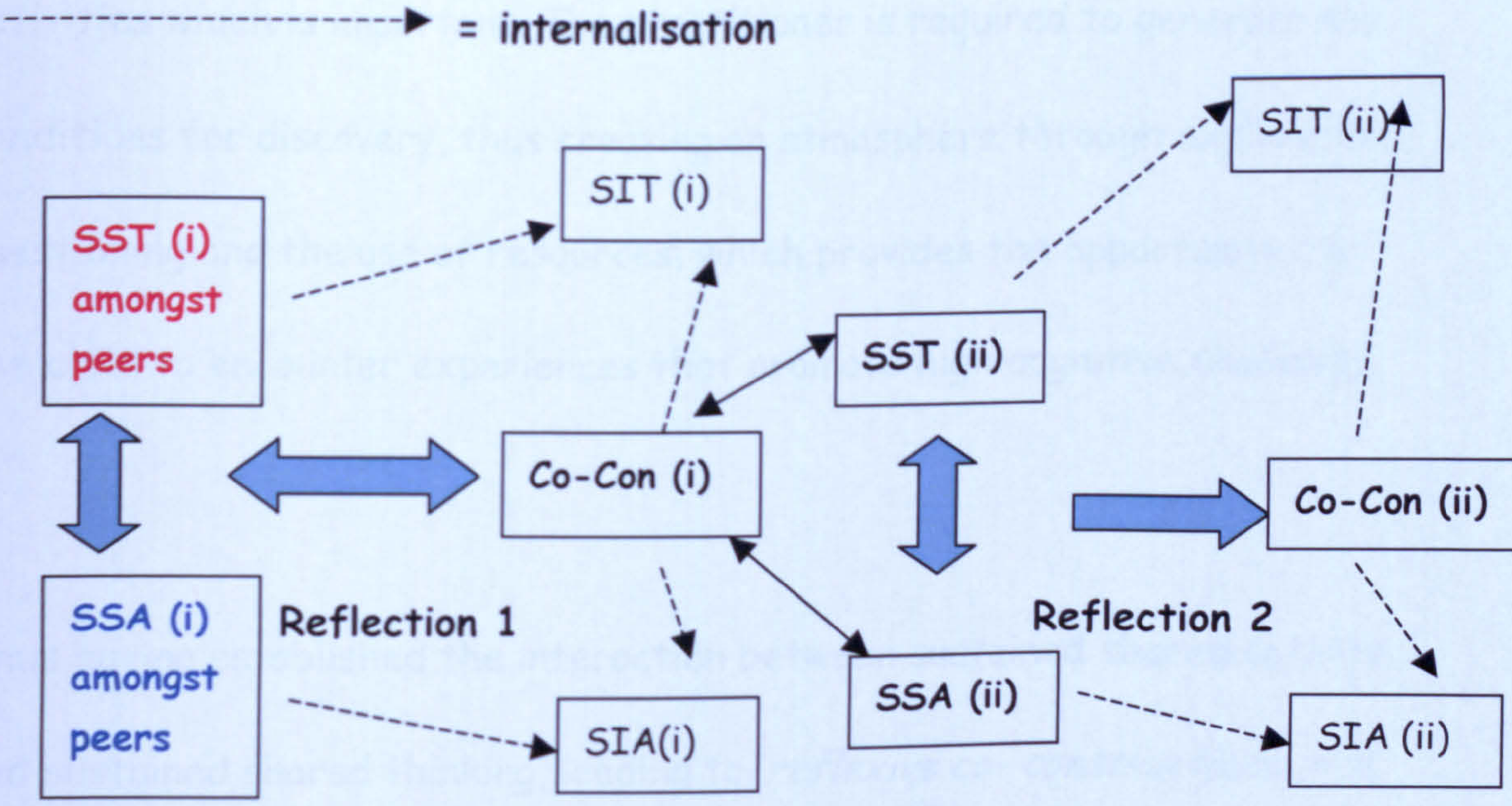
Fig 23: Vygotsky and Co-construction 1



This diagram reveals how, at the individual level, a child may find, through their interpersonal experiences of shared thinking and shared activity, knowledge being internalised, hence facilitating the intrapersonal representations of their experiences. This idea can be extended to explore

learning through related themes and how children revisit ideas and formulate further '*co-constructions*'. This is represented below. (Fig 24 Vygotsky and Co-construction 2)

Fig 24: Vygotsky and Co-Construction 2



However, the nature of co-constructions cannot simply be viewed as the outcome of an individual reflecting and thinking about a matter relating to an activity. Although this is important, consideration should also be given as to how such reflections are shared with others within the constructs of varying realities. It is through these co-constructions that children may engage in challenging levels of cognitive functioning, which I propose can be understood as shared or as Moll and Whitmore (1993) refer to as

'collective zones of proximal development' (1993, p132). Of course it is the shared activity that gives rise to shared thinking, so it may be necessary for the practitioner to extend the activity to allow for more advanced levels of cognition. High cognitive challenge does not simply occur because children engage in shared activity. It is the quality of these shared activities which is important. The practitioner is required to generate the conditions for discovery, thus creating an atmosphere through exploration, questioning and the use of resources, which provides the opportunity for the child to encounter experiences that promote high cognitive challenge.

Thus having established the interaction between sustained shared activity and sustained shared thinking, leading to '*reflexive co- constructions*', it is now possible to begin to explore just how the practitioner can indeed support co-construction by creating challenging and productive shared activities within the three realities of shared coordinated *events*, *episodes* of structured mediated activity and *interludes* of free associations. These are explicated on the following page using the diagram (Fig 22, p278) presented earlier.

Coordinated shared *events* through the notion of Distributed Cognition.

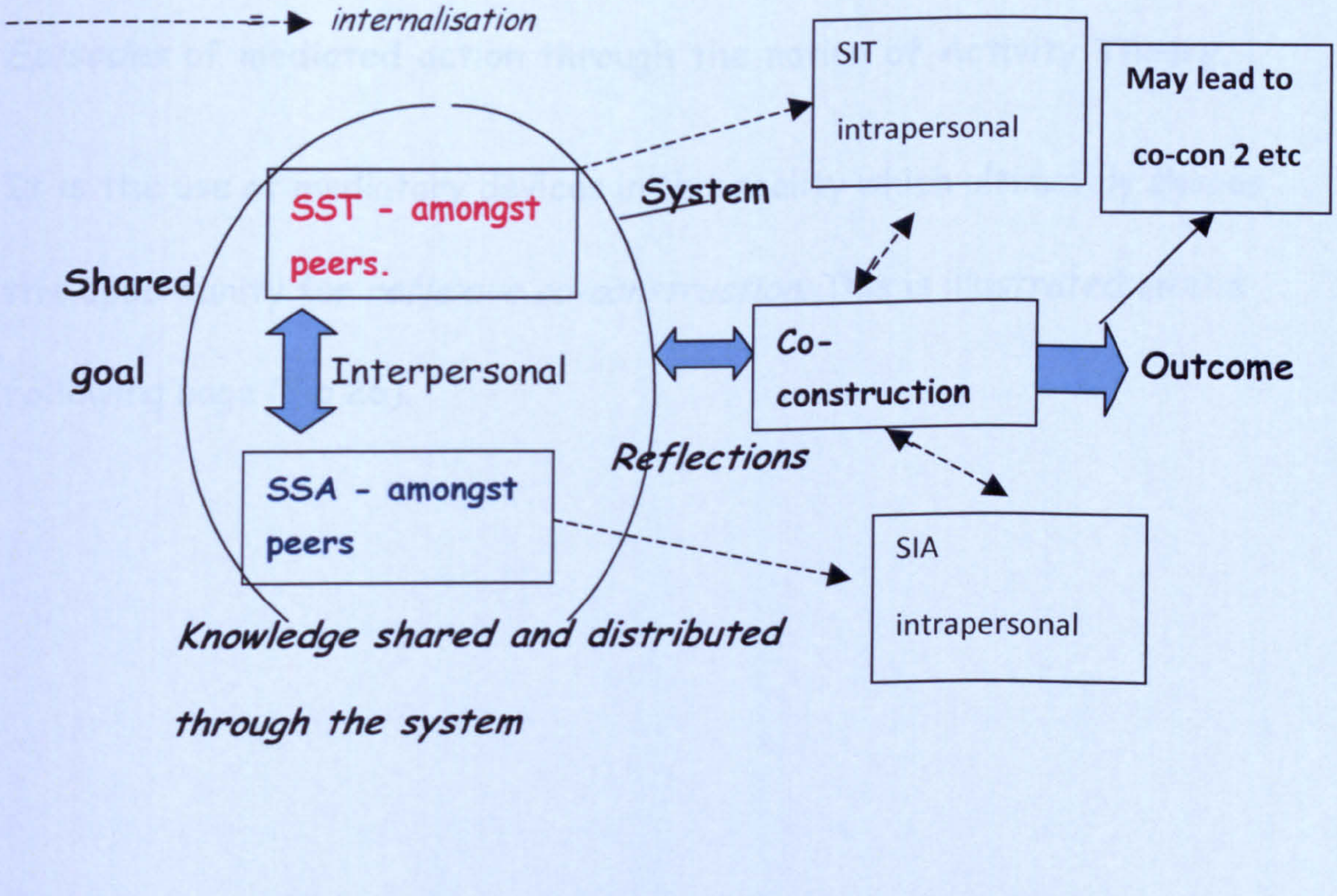
Within this reality *sustained shared thinking* and *sustained shared activity* occur within a system as discussed in Study 2. This can be represented in the following format (Fig 25).

Fig 25: Reflexive co-construction through shared co-ordinated *events*

Abbreviations: ***SST*** *=Sustained shared thinking* ***SSA****= Sustained shared activity*

SIT *=Sustained individual thinking* ***SIA*** *=Sustained individual activity*

Co-con*=Co-construction*



In order to facilitate this process, the practitioner needs to become attuned to the roles children undertake in order to maintain the function of the system. If we refer to the nursery rhyme shared event discussed in

Study 2 pp167-172, there was evidence of shared thinking through shared activity. The children were sharing their ideas through words and gestures at the interpersonal level. In order to draw these out the practitioner used her voice and props. This informs the children of when the event will commence and finish. Utilising these various resources is important if one is to sustain shared thinking and activity, and thereby facilitate the potential for *reflexive co-construction within coordinated events*. This in turn gives rise to thinking via internalisation at the intrapersonal level.

Episodes of mediated action through the notion of Activity Theory.

It is the use of mediatory devices in this reality which ultimately shapes the opportunity for *reflexive co-construction*. This is illustrated on the following page (Fig 26).

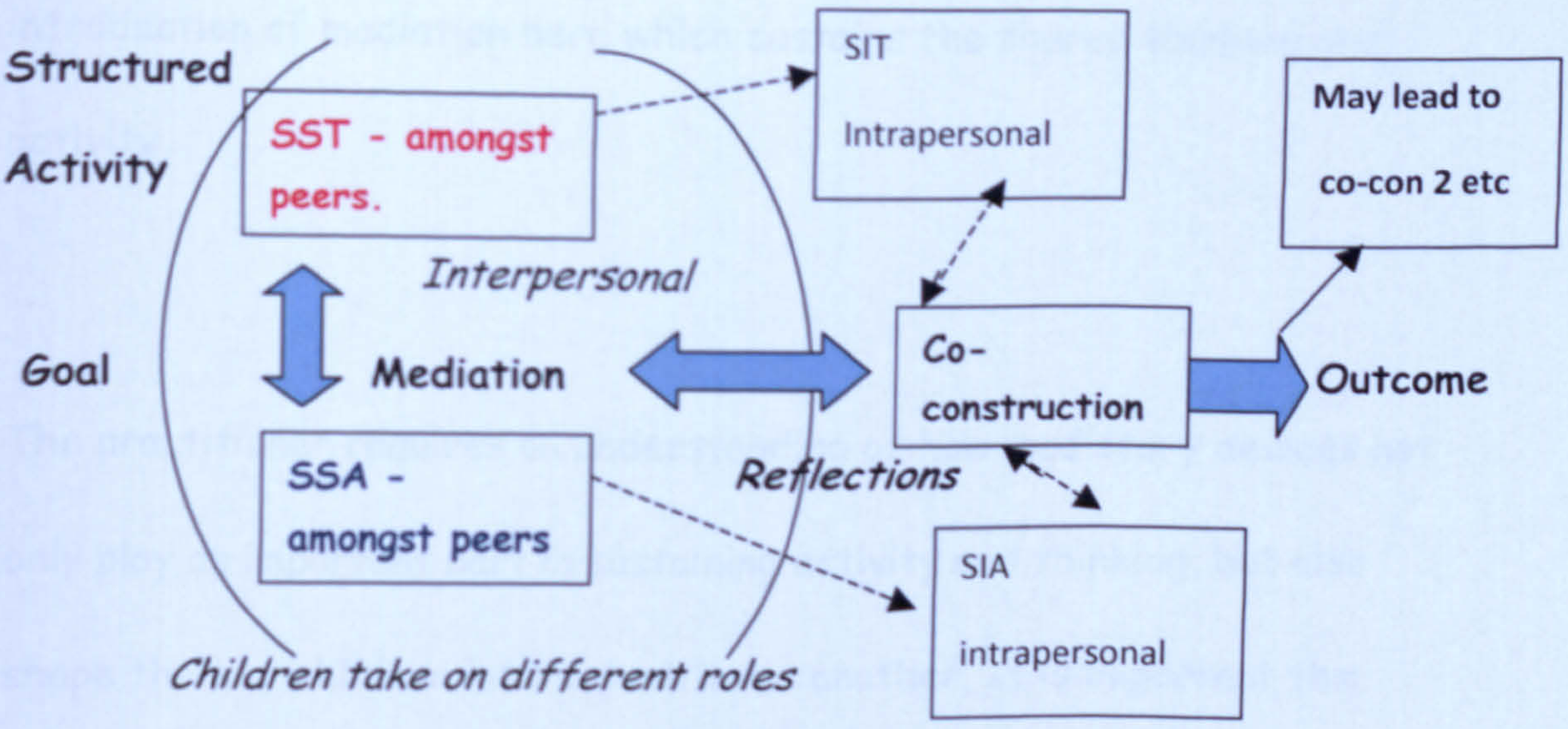
Fig 26: Reflexive co-construction through *episodes* of structured mediated activity

Abbreviations: ***SST*** *=Sustained shared thinking* ***SSA****= Sustained shared activity*

SIT *=Sustained individual thinking* ***SIA*** *=Sustained individual activity*

Co-con=Co-construction

----------=-▶ *internalisation*



If we refer to the creativity activity in Study 3, pp218-222, we can observe the impact of being able to use the mediatory device of the glue effectively on the outcome of the activity. Children A and B initially imitate one another using ribbons and textile materials. However these do not stick on the card. Very little progress is made. The co-constructions are limited. This contrasts sharply with child C who has knowledge of how

to use the glue appropriately. Child B seeks help from the practitioner. Through mediation the adult is able to support the children, who now, as a result, begin to make progress. They undertake differing roles as they explore the activity via mediation. The sharing of ideas, through their shared activity, develops at the interpersonal level, and thus the opportunity for '*reflexive co-construction*' is apparent, giving rise, via internalisation, to thinking at the intrapersonal domain. It is the introduction of mediation here which sustains the shared thinking and activity.

The practitioner requires an understanding of how mediatory devices not only play an important part in sustaining activity and thinking, but also shape the way children interact with one another. It is important the practitioner recognises and supports the varying roles children adopt as a means to express and share ideas in order to reach their agreed outcome.

Interludes **of free association through Situated Action**

What distinguishes this reality from the other two is that the objective of any activity has not been defined at the start, for it emerges from the activity itself as demonstrated in the following diagram (Fig 27).

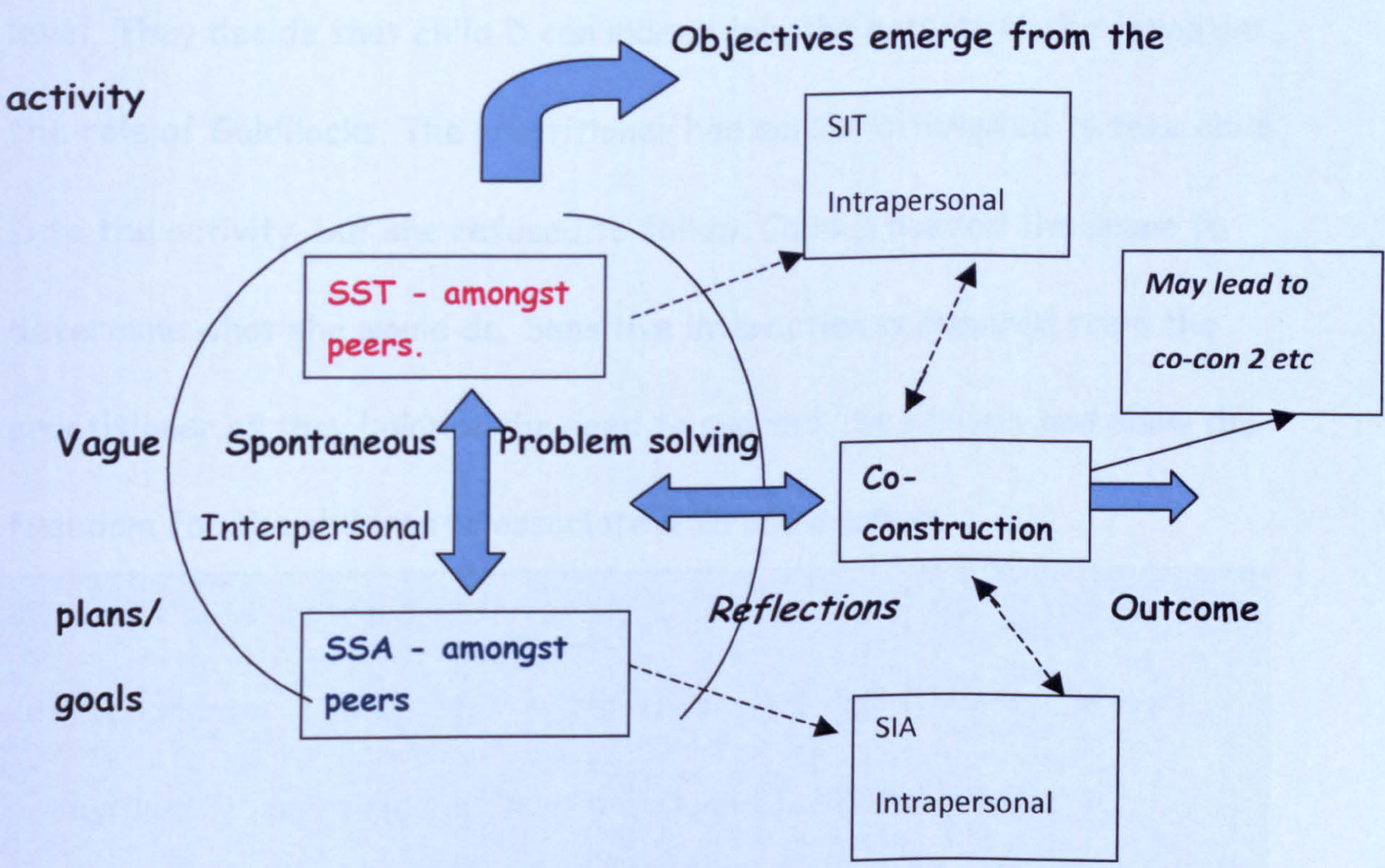
Fig 27: Reflexive co-construction through *interludes* of free association

Abbreviations: ***SST*** *=Sustained shared thinking* ***SSA****= Sustained shared activity*

SIT *=Sustained individual thinking* ***SIA*** *=Sustained individual activity*

Co-con*=Co-construction*

----------=-► *internalisation*



As a practitioner it can be a challenge to allow the opportunities for sustained shared thinking, sustained shared activity and the objectives to

emerge. In Study 4, pp242-249, one can see the development of sustained shared thinking and activity as child D attempts to negotiate her place in the role play activity. She sensitively communicates to her peers her desire to be a member of the group and her ideas of how she can participate in the activity of retelling the story of the 'Three Bears.' Discussion at the interpersonal level takes place amongst the children already in the role play areas as to whether she can join the group. They had previously decided that three children would be involved, but through shared activity and thinking, they re-negotiate and co-construct an alternative agenda. Thus via internalisation the children begin to engage in thinking at the intrapersonal level. They decide that child D can indeed join the activity if she takes on the role of Goldilocks. The practitioner had earlier attempted to take child D to the activity, but she refused to follow. Child D needed the space to determine what she would do. Sensitive interaction is required from the practitioner as they balance the need to support the activity and allow the freedom for the children to associate with one another.

During the final stages of the study, I presented informally to a number of experienced colleagues, the final frameworks analysing *'reflexive co-construction'* identified in Chapter 5 (Figs 21-27). I was eager to explore if such frameworks could be explicated to and understood by experienced and highly qualified early years practitioners.

5.5 Engaging with Colleagues

As part of developing a strategic approach for monitoring the validity and reliability of data and to stress test the final frameworks with colleagues I engaged in regular discussions with practitioners

The time allocated to engaging with colleagues discussing my proposals in terms of understanding the potential for '*reflexive co-construction*' amongst the children themselves was both exciting ad stressful. I was very aware that the format disseminating my findings was crucial if my explication of peer activity and '*reflexive co-construction*' could indeed make a significant contribution to developing early years pedagogy.

I considered a combination of both formal and informal discussion was the most suited approach to engaging with colleagues. It had both the flavour of a training session and also the more informal open discussions which practitioners were accustomed to.

Thus I first presented to five early years practitioners my findings starting from an exploration of *sustained shared activity and thinking* and

extending this notion to include *'reflexive co-construction'*, underpinned by a Vygotskian theoretical framework. Finally I went onto explore how *'reflexive co-construction'* could be reflected through peer activity within the three very different contexts of *formal shared events, episodes of structured learning activity* and *interludes of free association.*

Practitioners were asked to consider if they could apply such frameworks to the experiences children encounter in the nursery setting.

Practitioners had opportunity to ask questions and raise concerns.

I asked them to reflect on the findings of the study as they returned to the nursery classroom with particular reference to listing the moments of the day when they felt they could apply the frameworks to enhancing their understanding of their observations of the children.

After a period of three days I spoke to them individually to explore their conclusions. I sought the opportunity for very individual and honest discussion with each of the five members of staff who attended the initial meeting. I felt being in a group may not have allowed such critical reflection, as I wanted staff to feel relaxed with regard to questioning not

only my work, but also if they themselves were uncertain about their own understanding of the area discussed.

From both the presentation and the discussion several interesting points were raised. All five practitioners considered the area of *sustained shared activity and thinking* fascinating in terms of understanding peer activity. Equally the notion of '*reflexive con-construction*' emerging from *sustained shared activity and thinking* was an area that they had not fully explored before. They stressed that they felt more explication of this area was required if they were to fully understand how the potential for *'reflexive co-construction'* could develop.

When asked to discuss their observations of peer activity in relation of the frameworks presented in Chapter 5 (Figs 22-27), a somewhat mixed response emerged, which proved particularly valuable when considering how to develop a training package for practitioners on peer activity.

Firstly, all practitioners were very confident in their response and understanding of peer activity and the potential for *'reflexive co-*

construction' during *episodes* of structured mediated activity. This felt most familiar to them. They commented that they could identify with the various roles children undertake as a means to complete the activity and how these created opportunities for *'reflexive co-construction'.*

Secondly, practitioners were aware that during formal shared *events* there was indeed opportunity for '*reflexive co-construction,*' however some commented that moving along a corridor from their perspective was purely a task concentrating on getting the children from A to B, rather than a moment for learning and engaging in '*reflexive co-construction'.* Conversely, two practitioners felt that by highlighting the potential for '*reflexive construction'* in what appeared to be a somewhat mundane task actually allowed them to consider these moments of the day from the perspective of the children. They commented that they began to monitor their own role in terms of organising, coordinating the activity and offering the children opportunity for sharing their ideas.

Finally, the notion of peer activity during *interludes* of free association and the opportunity for *'reflexive co-construction'* highlighted how many practitioners felt challenged by these situations. One commented *'Not*

knowing what they (children) are going to do makes it difficult to plan for their needs.' It was evident that some had not considered these moments of the day as having potential for '*reflexive co-construction.*' This was particularly true of the reception area as children waited for the start of the nursery session. One commented that '*As we (practitioners) are not involved at this moment of the day we hadn't thought of it in this way.'*

My conclusions, from this time spent engaging with colleagues, was that peer activity was an area of interest for practitioners. Indeed some admitted to being surprised at the range of self initiated activities children had undertaken in such varied situations, although they admitted to being uncertain as to how to articulate with others their observations. Equally noting children engaging in '*reflexive co-constructions' began* to move their attention away from themselves as practitioners whereby their role is to plan and organise the children's learning experiences, to considering peer activity from the perspective of the children themselves.

Although this session was very rewarding and stimulating I was aware that in terms of training, I needed to consider further how these frameworks in Chapter 5 could be utilised to facilitate practitioners understanding. Some commented that there was a great amount to '*take on board at once!*"

5.6 Developing Training and Advanced Practitioner Workshops

Mary Evans (2010), a writer on varying issues relating to early years education, has described how the notion of *sustained shared thinking* is now high on the agenda for early years practitioners. She refers to Kathy Brodie, an early years professional and trainer, who argues that more courses should be available for early years practitioners in the area of '*reflexive co-construction*' and '*sustained shared thinking*', in order to allow them to effectively support the children's thinking.

I feel confident that through the systematic approach to validating the reliability of my findings, that training materials can be developed. Indeed, for experienced early years practitioners, the research findings from Studies 2-4, can be used to structure training to enhance practitioners understanding of the notion of '*reflexive co-construction*' from the perspective of peer activity. The question of course is how to present and formulate such training packages.

I propose that there are five key principles identified within this study which have the potential to inform practice, and thus offer a significant contribution to advancing early years pedagogy. These principles can be used to underpin an effective package of training.

Firstly, peer activity cannot be ignored if we are to fully understand early years educational experiences. In order to appreciate peer activity one must consider not only how peers interact with one another, but also the peer dynamics or the patterns of interaction. For example how imitation is used by the children to communicate ideas, their role in the activity and as a means to ingratiate themselves with another to become part of an activity.

Secondly, peer activity does not take place within a vacuum, but is contextualised by the situations or *realties* children encounter on a daily basis.

Thirdly, these *realities* can be defined by a specific language, *events, episodes and interludes,* and if utilised correctly, practitioners can begin to articulate their ideas more effectively.

Fourthly '*sustained shared thinking*' emerges from *sustained shared activity.* The quality of these shared activities can impact upon the level of cognitive challenge children experience.

Finally, '*reflexive co-construction*' is not simply limited to the adult and child interactions, but can be extended to include children's shared '*reflexive co-constructions*', which can develop from those moments when children engage *in shared activity and thinking*. This principle is underpinned by Vygotskian theory which is reflected through the frameworks in Chapter 5.

Having established the five main principles, I suggest the following structure for developing training materials to inform experienced and well qualified practitioners. Each element of training contains both theoretical considerations as described below and supplementary practitioner observation and reflective activities which can be sourced in. Appendix 7. It is suggested that these two elements of training are examined side by side.

1.) Defining Context and Peer Activity (See Appendix 7)

Exploration and informed observation of peers in the three realities identified in this study, namely, formal shared *events*, *episodes* of structured mediated activity, and *interludes* of free association. This will

require a simplified description of the contextual frameworks of distributed cognition, activity theory and situated action to more fully appreciate the varying realities children encounter on a daily basis. It is at this stage that the specific language used within the study (events, episodes and interludes) is clearly referred to so as to enable practitioners to begin to articulate their observations.

2.) Exploring Peer Interaction and Peer Dynamics I (See Appendix 7)

From this initial examination it is then possible to identify and analyse the varying ways in which children interact with one another, through such means as imitation, or the taking on of different roles in an activity (leader, follower, negotiator and observer). Practitioners can be introduced more fully to the terms used to define peers such as activity, interaction and dynamics as a means to articulate their observations at an advanced level. If a practitioner can more fully appreciate this, then they can become more attuned to peer activity, and thus facilitate and enhance the peer interaction.

3.) Exploring Peer Interaction and Peer Dynamics II (See Appendix 7)

Having established this understanding of peer activity it is then possible to begin to consider what these peer interactions offer for the children themselves. What do they gain from these in terms of extending their own learning and thinking?

4.) Examining Sustained Shared Activity/ Thinking (See Appendix 7)

One can begin to further explore *sustained shared activity and thinking* by revisiting Vygotsky's socio-cultural theory. Practitioners can consider shared activity as a source for sustained shared thinking. To facilitate this process, practitioners can consider activities which they have observed that give rise to sustained shared thinking. Equally they can reflect upon how they as practitioners have extended the shared activity to create conditions for the children to experience moments of high cognitive challenge as explored through Vygotsky's notion of the '*zone of proximal development.*'

5.) Identifying Opportunities for Reflexive Co-construction (See Appendix 7)

Once practitioners fully appreciate the link between sustained shared activities and sustained shared thinking, work can begin on consolidating initial explorations of peer activity within the different realities through the various contextual frameworks. This is supported by the frameworks in Chapter 5 (Figs 21-24) which will require considerable exploration and explication, before the practitioner can begin to apply the notion of '*reflexive co-construction*' to their observations of peer activity.

To support this suggested outline for developing advanced practitioner workshops training materials will naturally consist of prepared video material, practitioners own observations (Appendix 7) within their own setting and a simple glossary listing the key terms introduced within the training to support practitioners' articulation of observed material.

By following this structure, I believe that it is possible to further enhance practitioners understanding of peer activity, peer interaction and peer dynamics, which will provide a platform from which to consider the emergence of '*reflexive co-construction*'. This process provides the

opportunity for practitioners to gain greater insight into how children not only engage with one another, but also co-construct knowledge from and with one another. Such an enhanced understanding will undoubtedly impact upon early years principled pedagogy, which will be reflected in how practitioners not only observe peer activity, articulate about what they note through the use of the specific terms - *events, episodes, interludes, peer interaction* and *peer dynamics,* and plan for *peer activity*, but also in how they become aware of shared thinking processes or *'reflexive co-constructions'* through peer activity. Indeed Stephen (2010) argues that '*without a well-developed understanding of the ways in which they (practitioners) can support children's learning practitioners are ill equipped to take on the competing demands they will encounter'* (2010, p27).

5.7 Implications for future Early Years Research

Having established that context forms the framework for peer activity, it would now be relevant to consider if *reflexive co-construction* occurs more frequently within a particular reality. Is this expressed at an individual level, where it varies for different children, or can it be observed at a more general level?

Siraj-Blatchford (2002) suggests that '*reflexive co-construction*' is more apparent in the child-initiated activity. I would agree, but is it possible to increase the potential for co-construction in the three realities, if practitioners become more attuned to peer dynamics? By examining this next step, I believe this will further support experienced practitioners to appreciate their role in supporting '*reflexive co-construction*' amongst the children themselves.

5.8 Conclusion

I have demonstrated in Studies 1-4 just how complex and varied peer dynamics can be. This challenges Azmitia's (1997) somewhat simplistic view of peer activity as discussed in Chapter 1 p15-16.

This small scale research project has highlighted that, by understanding peer dynamics and recognising that children relate to one another in different ways according to the reality they encounter, one can begin to consider how '*reflexive co-construction*' is formulated through *sustained shared thinking and sustained shared activity* amongst the peers themselves. From this work, I believe it is possible to see a pedagogical model emerging, from which practitioners can begin to further enhance

their understanding of peer activity and their role in terms of facilitating *reflexive co-constructions* as children interact with one another in the early years.

Having said this, however, I am very aware that this small scale research project only provides a snapshot of what is a complex and fascinating area. It is only the beginning.

Chapter 6 - Summary

Peer activity is contextual. When it is explored via the frameworks of, an ecological understanding of human development, distributed cognition, activity theory and situated action, it is possible to examine the interplay between peer dynamics and context. In terms of early years pedagogy, peer activity is as important as the role of the adult if we are to consider children as social beings and to understand how they interact with one another.

The key points raised from this study can be summarised as follows:

- To understand the notion of '*reflexive co-construction*', (Siraj-Blatchford, 2002, p10) it has been argued that a greater appreciation of peer activity is required.

- The EYFS (2007) presents a clear pedagogy for practitioners to follow. However, its examination of peer activity and context raised several questions as to how this could be more fully understood.

- To understand peer activity, one must ascertain the broad general context in which it takes place. Bronfenbrenner's (1977, 1994, 2nd edn, 2005) Bioecological Model of Human Development has been utilised to achieve this outcome.

- Children's daily social experiences can also be examined through the three different realities of formal shared *events*, *episodes* of structured activity and *interludes* of free association, which are familiar to experienced practitioners. These define peer phenomena on a day to day basis. To fully appreciate these realities, the contextual frameworks of distributed cognition, activity theory and situated action have been successfully applied to consider how context and peer activity interact with one another.

- The contextual frameworks do not work in isolation, but flow into one another through the day as different activities link and combine. Both the practitioner and the children determine how these varying patterns or sequences are structured. Thus an array of peer activity is revealed.

- By analysing peer dynamics within different realities, it is possible to begin to explicate how '*reflexive co-construction' (Siraj-Blatchford, 2002, p10)* occurs in each situation. From these beginnings one can progress towards reflecting on the practitioner's role to facilitate co-construction amongst peers.

- Finally to develop an effective educational pedagogy an understanding of peer activity within the context of real experiences is crucial. I believe that what is emerging from this thesis, albeit in its early stages, is a structure for the development of a discourse amongst experienced practitioners, for exploring peer activity and the opportunities for '*reflexive co-construction.*' This could be utilised as part of their professional development programme.

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Appendix 1

Glossary

Activity Theory:

A theoretical framework that has its roots in Vygotsky's socio cultural theory, which examines human social activity beyond the individual to include groups of people, or whole organisations. It is utilised in this study to examine peer activity when young children are engaged in structured mediated learning activities.

Bio-ecological Model of Human Development:

This is an ecological approach to understanding human development, formulated by Bronfenbrenner, which argues that each child develops in a complex environment which has many layers or tiers from the micro to the macro and visually represented in a series of concentric circles.

Children's Centre:

A Children's Centre is part of the government's Sure Start initiative programme, which provides a range of services e.g. health care, speech and language support, adult education, day care facilities for children up to the age of 5 and play activities/sessions for families and their children, in addition to early years education.

Co-construction:

A Socio-constructivist's notion, that knowledge is constructed when two or more individuals engage cognitively with one another.

Collective Zones of Proximal Development:

This defines children's shared zones of proximal development, when they experience high levels of cognitive functioning, while working on a shared activity. Support to complete the task may be gained from each other or from a more able learner such as a practitioner, as the children are cognitively challenged. This is in contrast to individual zones of proximal development as an individual undertakes an activity of high cognitive

challenge through the support from a more able learner. (See Zone of Proximal Development).

Contextual Framework:

A structure utilised for examining context in its many forms.

Discrete Observer:

The researcher is hidden while observing the children.

Distributed Cognition:

This is an area of cognitive science which argues knowledge and cognition is not simply confined and isolated to the individual, but is distributed and shared amongst those individuals placed within a group, through a system which organises the distribution of that knowledge. In this study it is utilised as a contextual framework to examine young children engaged in formal and shared activities.

Early Years Educational Setting:

Any early years educational setting which provides early education in accordance with the Early Years Foundation Stage (2007).

Early Years Foundation Stage (2007):

This document defines and describes the learning and development, and welfare requirements for children from birth to 5 years in an early years educational setting. It provides a range of resources for practitioners to access i.e. Statutory Framework for the Early Years Foundation Stage, Practice Guidance, 'Principles into Practice Cards', wall poster summarising the document and a CD-Rom with a range of supplementary resources including sample planning documentation, and relevant recent research papers.

EYFS:

Abbreviation for Early Years Foundation Stage (2007)

Episode:

Structured goal orientated activity where mediatory devices are employed.

Event:

A shared and coordinated goal orientated activity often led by an adult.

Interlude:

A moment within an activity, where children freely associate with one another, in an unstructured, often non goal orientated manner.

Interpersonal:

A Vygotskian notion, which highlights that individuals first construct knowledge through the interaction with others.

Internalisation:

A Vygotskian notion which suggests that having co-constructed knowledge at the interpersonal level the individual can internalise or further understand that knowledge and begin to engage in thinking at an intrapersonal level. (see below)

Intrapersonal:

Having engaged with others as a means to construct knowledge, the individual can now further construct that knowledge at an individual level via internalisation.

Key Person:

Named member of staff (practitioner) assigned to support the learning and development requirements of individual children. They act as the main point of contact for parents, other practitioners and professionals.

Legitimate Peripheral Participation:

A model developed by Lave and Wenger (1991) to explore the gradual transition of an individual as an 'outsider' on the periphery to full membership of a group or community who are engaged in a shared activity. It is through this process that individuals gain an understanding of the community and the knowledge needed to complete the activity undertaken by the group or community.

LPP:

Abbreviation for Legitimate Peripheral Participation

Mediation:

A term used within socio-cultural theory to describe how one does not directly interact with the world around them, but indirectly through the use of mediatory devices.

Mediatory Devices:

Mediatory devices are resources used to mediate between the individual and the world around them. These can be defined as *artefacts or tools* such as classroom resources, *semiotic features*, for example, language and communication systems and *personal support* given to a child by, for example, the adult.

Mediating Artefacts:

These are tools or resources in the classroom that children utilise as a source of mediation, as the child indirectly interacts with their environment.

Participant Observer:

Researcher is involved with the children as they engage in their activity. Notes of the observation are recorded using camcorder or pocket recorder.

Practitioner:

A term used to describe an adult (with an early years qualification) who works with a child in an early years educational setting.

Peer Activity:

This can be defined as a moment when children are engaged in a particular task, which may have a clear beginning, middle and ending.

Peer Dynamics:

Peer dynamics explores the varying patterns of peer interaction, namely when and how such interaction occurs as children engage with one another.

Peer Interaction:

This can be defined as the ways in which children relate to one another.

Peer Phenomena:

A term used to define anything that happens amongst peers as children engage with one another, which can be further explored through peer activity, peer interaction and peer dynamics as defined above.

Practitioner Ethnography:

When the practitioner engages in ethnographic study, within their own setting.

Realities:

Situations children encounter on a daily basis within a children's centre.

Reflexive Co-construction:

A term used by Siraj-Blatchford (2002) in the report 'Researching Effective Pedagogy in the Early Years,' which suggests that knowledge is co-constructed when two or more individuals engage cognitively with one another. There is a mutual awareness of the other individual(s) and their contribution to the activity.

REPEY:

An abbreviation for the report led by Siraj-Blatchford (2002) entitled 'Researching Effective Pedagogy in the Early Years.'

Setting:

Shortened version for the phrase 'early years educational setting.'

Situated Action:

This argues that all knowledge and learning is situated in activity, which is not predetermined by a given objective, as these emerge from the activity itself. In this study, situated action is used as a contextual framework, to examine moments in the day when children are engaged in interludes of free association, of a generally open nature.

Staff:

Practitioners working with young children within a children's centre.

Sustained Individual Activity:

Having explored knowledge at the interpersonal level through sustained shared activity, the individual begins to engage in sustained individual activity which can give rise to sustained individual thinking. (see below)

Sustained Individual Thinking:

A Vygotskian notion, which suggests that once knowledge has been internalised the individual can engage with such knowledge at an intrapersonal level – sustained individual thinking.

Sustained Shared Activity:

Where two or more individuals engage in an activity. This gives rise to sustained shared thinking. (see below)

Sustained Shared Thinking:

A moment when two or more individuals cognitively engage with one another to problem solve, clarify or evaluate a concept, thus enabling the individual to reach higher levels of cognitive ability.

Zone of Proximal Development:

Identifies the higher cognitive levels which a child can achieve when supported by a more able learner such as a practitioner.

ZPD:

An abbreviation for 'Zone of Proximal Development.'

Appendix 2

Personal Reflections

Exploring peer dynamics has not been an easy journey. At the outset, I was aware that undertaking research in this area would be challenging. Equally, managing my own disability with the demands of a job and the Doctorate course itself was at times overwhelming. I was conscious that if I was to even attempt such a project, one would need to make adaptations as to how I engaged with different elements of the course. One key feature of this is the high level of face to face discussions with my tutor as I was unable to attend the various conferences provided as part of the programme itself.

As with any study, there have been moments where I was making progress and other occasions when I experienced sheer frustration at the amount of work to be done. Conducting such research at a time when my daughter was very young has been difficult, although watching her interact with her own peers continued to inspire and motivate me.

As an experienced practitioner, my major worry at the start of the project was if, indeed, other practitioners encountered the types of realities I had observed. Was it possible to define context in these terms? There have been many times when I have been concerned that I would be unable to, firstly, articulate clearly to other experienced practitioners just what it was that I was noticing and, secondly, if this would be of interest to them. Indeed was it possible for me to develop a structure from which early years pedagogy could emerge, which not only informed practitioners on the area of peer activity, but would also add to the current interest surrounding the notion of '*reflexive co-construction*? (Siraj-Blatchford, 2002, p10)

As stated in Chapter 1, I was keen to develop an applied study rather than a purely academic one, However, I wondered if the utilisation of such differing contextual frameworks would be meaningful to practitioners. Were they too abstract to simply be applied in this somewhat novel way? I believed they could be relevant, but specific terminology would need to be developed in order to begin to communicate just what it was I was trying to explore. This consequently led to introduction of terms used throughout the thesis to define both context namely, shared co-coordinated ***events,***

episodes of structured mediated activity and *interludes* of free association of a general open nature and peers such as peer *activity, peer interaction* and *peer dynamics.*

Although challenging from the start, as a practitioner first and foremost, this study has enhanced my understanding of just what occurs amongst the children themselves within varying realities, and how this sets the scene for the emergence of '*reflexive co-construction*'. By exploring peer activity in the early years through varying contextual frameworks, I consider this will add another dimension to current educational pedagogy for experienced practitioners in the early years.

Appendix 3

Photographs of the Children's Centre

The following pictures show the Children's Centre and the microsystems in which the research is located.

The Children's Centre

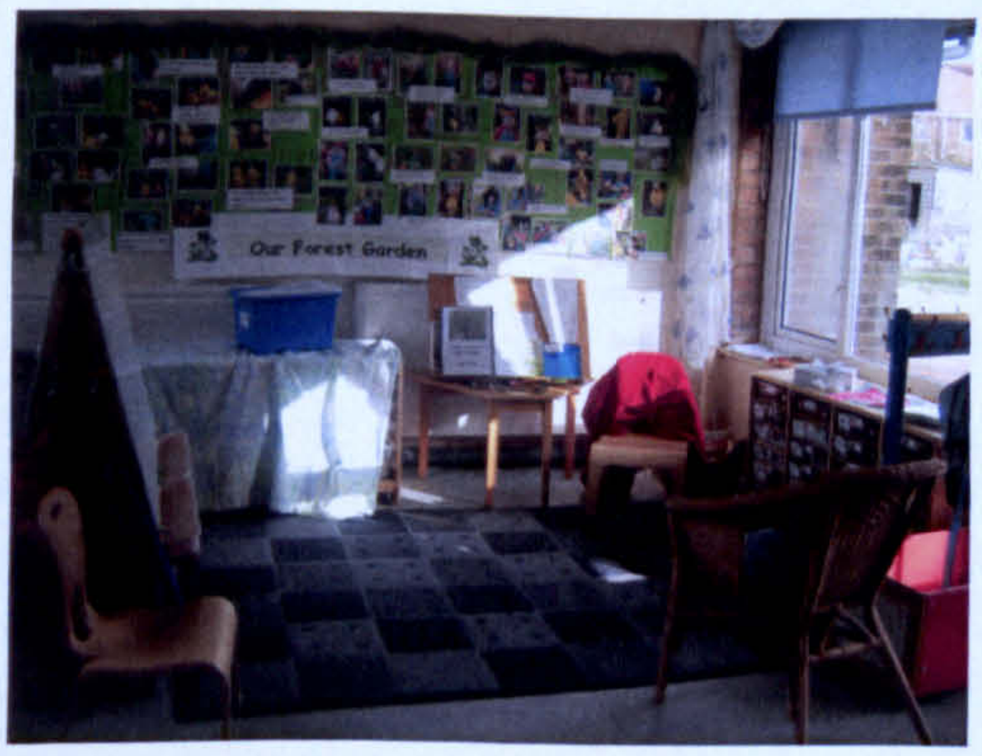
Microsystems

Reception Area

Hall

Corridor

Nursery Classroom Indoors



Outdoors

Appendix 4

Practitioner Questionnaire

Thank you for agreeing to complete the following questionnaire. It should take no longer than 20 minutes. Please return the form to me by 19.01.09

Thank you once again for your support.

Helen

****

1. *Which areas of the Centre do you work in with the children?*

2. *What activities do the children engage in on a daily basis when in the different parts of the building?*

3. *Which tasks (when not working with children) do you undertake which support your work as an early years practitioner?*

4. *What documents do you refer to when planning activities?*

Please return by 19.01.09

Appendix 5

Tables and Lists

Table 1:Observation Diary - Study 1

Study 1					
Date	Location (microsystem)	Methodology	Times	Duration	Total number of hours
01.12.08 02.12.08	N/A	Collation of Documentation	9.30 - 11.30 9.30- 12.30	2hrs 3 hrs	5.00 hrs
05.01.09	N/A	Questionnaires given to staff Analysis of documentation to determine location for observation Timetable for observation given to staff	N/A		1.30 hours
12.01.09	Reception area, hall, corridor	Observation tracking children (Discrete observer)	8.30 - 11.30	3 hrs	8.50hours
13.01.09	Nursery room, corridor, hall	Observation (Discrete	8.50 - 11.20	2.30 hrs	

	Reception area, hall	observer)			
14.01.09	n/room n/room	Observation (participant observer)	8.40 -9.15	35 mins	
15.01.09	n/room, corridor, hall	Observation participant observer	9.15-10.15	1.00 hr	
16.01.09	as above	Observation participant observer	10.15 - 11.55	1.45 hrs	
After each observation notes were rewritten (typed) to aid analysis at a later date.					7 hours
19.01.09	N/A	Questionnaires returned from staff			
02.02.09	N/A	Analysis	9.30 - 12.00	2.30 hrs	6.30 hrs
03.02.09	N/A	Analysis		2 hrs	
04.02.09	N/A	Analysis	9.30- 11.30 9.30 - 11.30	2 hrs	

Total of 28.50 hours

Table 2: Observation Diary - Study 2

Study 2 Peer Activity through Distributed Cognition					
Date	Location (microsystem)	Methodology	Times	Duration	Total number of hours
09.02.09	N/room	Preparation	9.15-11.25	2.15 hrs	3.45 hrs
10.02.09	Corridors	'Hanging Out' period	9.10,9.35 11.10-11.55	20 mins 45mins	
11.02.09	Hall	as above Timetable for data collection given to staff	11.30-11.55	25 mins	
23.02.09	Corridors	Discrete observation Watching recorded material	9.10, 9.35, 11.25, 11.55 11.15 - 11.25	5 mins each=20 mins 10 mins	2.45hrs
	hall	Discrete observation	11.30-11.55	25 mins	
24.02.09	as above	Discrete observation Watching recorded material	As above	20 mins 10 mins 25mins	
25.02.09	as above	As above. Watched recorded material	As above	20 mins 10 mins 25 mins	

05.03.09	As above →		→	20 mins	55mins
06.03.09				10 mins 25 mins	
09.03.09	N/room	Discrete observation	8.55 -9.25 10.15-10	30 mins 15 mins	4.05 hrs
	corridor	Play recorded material	.30 11.55-12.00	5 mins 10 mins	
10.03.09	as above →		11.15-11.25 →	30 mins 15 mins,	
				5 mins 10 mins	
11.03.09	as above →		→	30mins 15 mins,	
				5 mins 10 mins	
18.03.09	As above →		→	30 mins 15 mins, 5 mins 10 mins	3hrs
19.03.09	→		→	30mins 15 mins, 5 mins 10 mins	
After each observation notes were rewritten (typed) to aid analysis at a later date.					6 hrs

23.03.09	N/A	Analysis	9.30 -2.30	2 hrs	5 hrs
24.03.09		Analysis	9.30 -11.00	1.5 hrs	
25.03.09		Analysis	9.30 -11.00	1.5 hrs	

Total number of hours = 24 .50 hrs

Table 3: Observation Diary - Study 3

Study 3 Peer Activity through Activity Theory					
Date	Location (microsystem)	Methodology	Times	Duration	Total number of hours
30.03.09	Nursery room	Preparation	9.25 -10.00	35 mins	1.35 hr
01.04.09	N/room	'Hanging Out' period	10.30-11.00	30 mins	
02.04.09	N/room	As above Timetable for data collection given to staff	10.30-11.00	30 mins	
20.04.09	N/room	Discrete observation (first 10 mins of each observation) Participant observer for remaining time. (including interview on the go with staff and children)	9.25-10.00 10.30-11.00	30 mins	3.15 hr
21.04.09	As above				
22.04.09	As above				

30.04.09	As above				2.10 hrs
01.05.09	As above				
05.05.09	As above				2.10 hrs
05.05.09	As above				
14.05.09	Nursery Room As above				1.05 hrs
After each observation notes were rewritten (typed) to aid analysis at a later date.					9 hrs
18.05.09	N/A	Analysis	9.30 -2.30	5 hrs	8 hrs
19.05.09		Analysis	9.30-11.00	1.30hrs	
20.05.09		Analysis	9.30-11.00	1.30hrs	

Total Number of hours = 27.15 hrs

Table 4: Observation Diary - Study 4

Study 4 Peer Activity through Situated Action					
Date	Location (microsystem)	Methodology	Times	Duration	Total number of hours
01.06.09	Reception Nursery room	Preparation Hanging out period	8.40-8.55 9.15 -10.30	15 mins 1.15 hr	4.10hrs
02.06.09	As above	→	8.40 -8.55 10.00 -11.25	15 mins 1.25 hrs	
03.06.09	As above	→	→	15 mins 1.25 hrs	
08.06.09	Reception	Discrete observations Play recorded material	8.40.8.55 11.15 -11.25	15 mins 10 mins	1.05 hrs
09.06.09	As above	→	→	15 mins 10 mins	
10.06.09	As above	→	→	15 mins 10 mins	
18.06.09	Reception As above	→	→	15 mins 10 mins	50mins
19.06.09	Reception				

	As above	→			
22.06.09	Nursery room	Discrete observation Play recorded material	9.25-10.00 10.30-11.00 11.15-11.25	35 mins 30 mins 10 mins	3.45hrs
23.06.09	As above	→			
24.06.09	As above	→			
02.07.09	As above	→		35 mins 30 mins 10 mins	2.20 hrs
03.07.09	As above	→		35 mins 30 mins 10 mins	
After each observation notes were rewritten (typed) to aid analysis at a later date.					8 hrs
13.07.09 14.07.09 15.07.09	N/A	Analysis Analysis Analysis	9.30 -1.30 9.15-11.15 9.15 -11.15	5 hrs 2 hrs 2 hrs	8hrs

Total number of hours= 29.30

List A: General routines and activities observed over a week are given below.

- Children arrive in the reception area with parents.
- Go to the hall for songs/rhymes with their parents and staff.
- Children, parents and staff move along the corridor to the nursery classroom.
- Hang up coats on to individual pegs and self register.
- Parents leave.
- Children choose from a range of activities for a short period of time.
- Children come together for introductions, songs, number games, rhymes and story in small groups of no more than 8 children with their key member of staff.
- Children invited to engage in indoor and outdoor play.
- Toilet time, Wash hands, Snack time.
- Short period of play indoors.
- Tidy up time.
- Children return to key practitioner for story in small groups of no more than 8 children.
- Preparations for lunch, Lining up for lunch.
- Children move with staff to the hall taking note of symbols/pictures communicating appropriate behaviour (e.g. walking not running).
- Children move to specific tables guided by key adult. Adult sits with their group.
- When finished children move as a group back to the classroom with staff to put on coats and collect any personal belongings.
- Children sit on the carpet as one large group with key practitioners to await the arrival of parents who will take them home.

List C: Linking activity to contextual framework.

Time	Activity	Reality of shared activity within a co-ordinated system containing the participants.	Reality of structured activity.	Reality of free association as spontaneously children engage with one another.
8.40	Children arrive in the reception area with parents.			*
8.55	Go to the hall for songs/rhymes with their parents and staff .	*		
9.10	Children, parents and staff move along the corridor to the nursery classroom.	*		
9.15	Hang up coats on to individual pegs and self register.	*		
9.20	Parents leave.			
9.25	Children choose from a range of activities for a short period of time.		*	*
10.00	Children come together for introductions, songs, number games, rhymes and story in small groups of no more than 8 children with their key member of staff.	*		
10.10	Toilet time. Wash hands.	*		
10.15	Snack time.	*		
10.30	Play indoors.		*	*
11.00	Tidy up time.	*		

11.15	Children return to key practitioner for story in small groups of no more than 8 children.	*		
11.15	Preparations for lunch. Lining up for lunch.	*		
11.25	Children move with staff to the hall taking note of symbols/pictures communicating appropriate behaviour (e.g. walking not running).	*		
11.30	Children move to specific tables guided by key adult. Adult sits with their group.	*	*	*
11.50	When finished children move as a group back to the classroom with staff to put on coats and collect any personal belongings.	*		
11.55	Children sit on the carpet as one large group with key practitioners to await the arrival of parents who will take them home.	*		
12.00	Children leave with parents			

Appendix 6

Data - Observation

Microsystem: Nursery Classroom- Indoors

Date of observation: 9.03.09

Observation: Discrete

Total No of children in the nursery: 18

Total No of practitioners in the nursery: 4

Areas in the room: Cloak room moving to carpet area

Reality 2: Formal Shared Events

Abbreviations:

C. = child/children, Pa. = parent /parents, P. = practitioner

Noise level 1= low ----------5=high 1 way interaction →

2 way interaction ↔

Time 9.08 -9.23	Observation Notes	Comments
9.08 9.10	Aware of sounds - children/ adult voices, footsteps, gates opening and closing. Main doors to the nursery are opened by P. leading group of Pa. and C. 3 Pa kiss their children at the door and leave. CA moves straight to peg. CB goes to P. for help with coat. CC wanders into the classroom, before	 Shared activity

	being guided back to take coat off and put it onto peg. Noise level 4 -talking, chatter, doors opening. P. smiling and assisting P ⟶ CA 'Hello what a lovely coat. Wish I had a coat like that'. P. touches shoulder of CA. 'In you go, Can you find your name card?' P. ⟶ CB 'That's it!' As he puts coat on peg. P. ⟶ CC 'Put your coat on your peg first, that's it. You've done your zip all by yourself, Wow look at that Mum.' Pa. ⟶ CC 'Great son.' Pa. ⟷ CC. smile 1 new Pa4/C4 standing at the door and watching group of children no movement from C4. C4 holding Pa4 hand Children at various stages of taking coats off and entering the room Noise level 3 2 C. completed task - move straight to block area. Pa. ⟷ C1 'Can you find your picture and your name card?' C1 ⟶ Pa. 'No I'm not sure' C2 ⟷ C1 standing alongside - 'Here it is. Look you are wearing your hat. Where is	chaotic Becomes more coordinated via support from P. Each C. Takes on activity of taking off coat. Shared event Self- registration Pa. coordinator C. coordinator C. prompts C. alignment

	your hat?' C1 looking at C2 C1 ⟷ C2 at home I've got a hood see points to coat. C2 'Oh.' C3 ⟶ C1, C2 shouts I've done it holds name card. Looks at C1 and C2 C2 ⟶ C1 C2 faces looks down 'Oh I can't find mine now'. Bends down to look at the cards more closely.	
9.15	Pa 1 ⟶ C1 Your name begins with a R sounds It looks like this. Find letter on display. C1 eyes follows Pa pointing C2 sitting on the floor C2 ⟷ C1 'Oh here it is - silly me.' C1 looks at C2 laughs let's go over there pointing to the role play area. Pa 4 ⟷ C4 Can you find your picture? C4 has 2 fingers in her mouth. Looks at Pa. then at cards and point to correct. one Pa 4 ⟷ C4 'Good girl. Put it on the board there.' Pointing to a space on the boards. C4 hugs parents P ⟶ Pa 4 standing nearby smiles at Pa4 P ⟶ C4 takes C4's hand 'In we go. What shall we do today? The doll's house it out today. Shall we do it again?' C4 guided by P. Pa4. watches at the door. Once C4 is in the room she leaves. C. have completed task	Pa modelling Questions/ prompts Pa questions/prompts P coordination Shared event completed
9.20		

9.23	P. still chatting with a Pa. Both very animated Noise level cloak room - 1. Noise level in the nursery room - 4	

Appendix 7

Training Materials

The following are suggested formats to develop an understanding of the notion of peer activity, through practitioner observation and reflective activities which correspond to the five key areas of training identified in Chapter 5.

Practitioner Observation and Reflective Activity 1

1.)Defining Context and Peer Activity

This activity enables the practitioner to begin to consider the daily realities, which children encounter as they engage with one another. It provides an introduction to terminology and reinforces the theoretical notion of context through distributed cognition, activity theory and situated action.

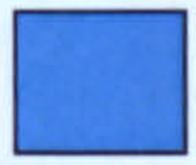
In your setting observe the different ways in which you, as the practitioner, group the children. How are the children organised? Consider why you do this.

- Do you organise the children in a shared group activity, such as story time activity, or sharing a snack or meal together?
- Do the children play in small groups on structured learning activities which you have planned and organised?
- Are there times when the children engage in a different task of a somewhat freer nature, when compared to the structured learning activities?

Record the various ways in which children are organised using the suggested grid below. Complete only the first 2 columns (time of day and activity)

Time of Day	Activity (Peer Activity)	Context (Colour Code)

Once completed, use the information provided below, which explores peer activity and context. Colour code each activity identified in your grid according to whether it is a formal *event*, *episode* of structured mediated activity or an *interlude* of free association.

Shared *Event* =  *Episode* of structured mediated activities = 

Interlude of free association = 

What is an event? A shared and coordinated goal orientated activity often led by an adult.

What is an episode? Structured goal orientated activity where mediatory devices are employed.

What is an interlude? A moment within an activity, where children freely associate with one another, in an unstructured, often non goal orientated manner.

Practitioner Observation and Reflective Activity 2

2.)Exploring Peer Interaction and Peer Dynamics I

This activity enables practitioners to begin to consider how peers engage with one another in differing contexts and introduces the notion of peer interaction and peer dynamics as a tool for articulating their findings.

Choose 1 peer activity from each of the colour coded contexts recorded in practitioner observation and reflective activity 1.

Shared Event  Episode  Interlude 

What is peer interaction? This can be defined as the ways in which children relate to one another.

- Observe in each of the contexts how children interact with one another. To begin with, look for the following behaviours - *imitation, leading, following, negotiating*. When confident consider beyond this list and note any other behaviours children use as a tool to engage with one another.
- Are children attempting to join in with another peer or groups of peers? What entry behaviours do they use?

What are peer dynamics? Peer dynamics explore the varying patterns of peer interaction, of when and how such interaction occurs as children engage with one another.

- Consider the patterns of interaction amongst the peers within in each of the contexts.

Practitioner Observation and Reflective Activity 3

3.)Exploring Peer Interaction and Peer Dynamics II

This activity provides practitioners with the opportunity to use their observations to explore why children interact with one another in such varying ways. Practitioners can now begin to consider how children share ideas with one another. This provides a platform from which to examine sustained shared activity /thinking and reflexive co-construction.

Using your findings from practitioner observation and reflective activity 2 refer to your observations on peer interaction and dynamics, consider what the children are gaining from the various ways in which they interact with one another.

For example:

- How do the children ingrate themselves with one another and why do they do they this?
- How do the children share their ideas and knowledge with one another?

Practitioner Observation and Reflective Activity 4

4.)Examining Sustained Shared Activity and Thinking

Once practitioners have understood the various components of peer activity within the differing contexts, they can utilise their observations to review the notion of sustained shared activity and thinking.

What is Sustained Shared Activity?: Where two or more individuals engage in an activity. This gives rise to *sustained shared thinking*. (See below)

What is Sustained Shared Thinking?: A moment when two or more individuals cognitively engage with one another to problem solve, clarify or

evaluate a concept, thus enabling the individual to reach higher levels of cognitive ability.

Select several observations from the previous practitioner activities that have interested you.

- Consider if the children are engaging in sustained shared activity. If so is there evidence of sustained shared thinking?
- How does *sustained shared thinking* emerge from the *sustained shared activity?*
- Write down the *shared activity and the shared thinking* that is occurring. What are the children trying to achieve? Is there a goal or are their intentions rather vague?
- Consider how you might as a practitioner extend the *sustained shared activity* and thus enhance the *sustained shared thinking.*
- Link your findings to Vygotsky's socio-constructivist theory of cognitive development and the notion of '*zone of proximal development.*'

Practitioner Observation and Reflective Activity 5

1.)Identifying Opportunities for Reflexive Co-construction

Building on the practitioners understanding of peer activity, peer interaction, peer dynamics, context, sustained shared activity and thinking, practitioners' attention is now drawn towards the notion of reflexive co-construction.

What is reflexive co-construction?: A term used by Siraj-Blatchford (2002) in the report 'Researching Effective Pedagogy in the Early Years,' which suggests that knowledge is co-constructed when two or more individuals engage cognitively with one another. There is a mutual awareness of the other individual(s) and their contribution to the activity.

- Using your observations of *sustained shared activity and sustained shared thinking*, can you identify moments when children engage in reflexive co-construction?

- Refer to the frameworks focusing on reflexive co-construction through shared formal *events*, *episode* of structured mediated activity and *interludes* of free association. How does each of these contexts shape the *sustained shared activity, thinking* and thus provide opportunity for *reflexive co-construction?*

- What is the role of the adult in sustaining and extending the activity, thus creating further opportunities for *reflexive co-construction?*

- Finally, refer back to practitioner activity 1. Look at your list of peer activities. How can you utilise your knowledge of *peer activity, peer interaction, peer dynamics, context (events, episodes and interludes) sustained shared activity, sustained shared thinking,* to promote opportunities for *reflexive co-construction* as children engage with one another?